

DIGITAL RESISTANCE



An empowering handbook for teachers on how to support their students to recognise fake news and false information found in the online environment

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The handbook supports teachers' and students' development of competences and digital skills to recognise fake news and false information found in the online environment. The handbook was piloted during several teacher training sessions and by teachers with their students in five participating countries, namely Austria, Germany, Greece, Italy and Romania.

Project leadership:

Dr Moritz Peter Haarmann
Institut für Didaktik der Demokratie
Leibniz Universität Hannover



Project co-ordination:

Richard Heise (heise@idd.uni-hannover.de)



In collaboration with: University of Pavia (Italy), University of Vienna (Austria), 1st EPAL Korydallou/Athens (Greece) and Inspectoratul Şcolar Judeţean Buzău (Romania)



Council of Europe: Sarah Keating, Katia Dolgova-Dreyer, Arzu-Burcu Tuner, Gloria Mannazzu, Korneliya Koleva, and Pierre Varasi

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Executive Summary

“The least initial deviation from the truth is multiplied later a thousand-fold.”

Aristotle

About this handbook

This handbook and additional dossiers, freely available at the Digital Resistance project homepage (www.digi-res.eu), provide all the information teachers need to conduct a short module on the topic of “fake news” in the classroom or other settings with a group of students aged between 14 and 20 years. The methodology suggested in this handbook can easily be adapted by other actors in the educational sector working in different learning contexts. It begins by providing background knowledge about the topic of fake news and digital competences, followed by guiding steps on how to work on this topic with students in a short module. The learning methodology used is based on enquiry-based learning, so students can be supported to conduct a small-scale research project on a self-chosen topic connected to fake news. Information on this can be found in Chapter 3 of this handbook. In Chapter 5, the concept of peer-to-peer learning is used to set up learning processes between students attending the short module.

An overview of each section of the handbook is provided in the figure on the next page. Chapter 1 begins with a description of the concept of fake news, followed in Chapter 2 by an introduction of digital competences that can be used to resist and act against fake news. Chapter 3 explains the methodology of enquiry-based learning that can be used for a short module to enable students to deal with real-world cases of fake news. Chapter 4 offers guidelines for teachers to assist students in the creation of a media output as part of the short module. The media output will reflect their learning process and summarise the findings of the research undertaken. Chapter 5 offers support in establishing peer-to-peer activities at school or online as an additional part of the module. It enables students to share the media outputs they have created and their experiences with other students.

It is recommended to use this handbook chapter by chapter, particularly if teachers have little background knowledge on the topic. Those with more experience can select the chapters that they want to use in class. The section of the short module in Chapters 3 to 5 provides various elements that can be added to already existing teaching modules. Teachers seeking to implement the domains of digital citizenship as defined by the Council of Europe (2018a) can refer to the beginning of each chapter, where the particular domains addressed are noted.

Introduction pp. 5-7	Chapter 1 (pp. 17-32) "Fake news" – A challenge for democratic societies	Chapter 2 (pp. 33-57) Digital competences to deal with fake news
Foreword pp. 9-15	Description, terminology and definition of "fake news" Introduction of counter-measures	Introduction of the concept of digital competences to counter fake news
Chapter 3 (pp. 59-64) Starting the short module: enquiry-based learning and research on fake news Research concept to start the short module		Short module
Chapter 4 (pp. 65-76) Creation of a digital output Tools and explanations of suggested media formats for students to create a digital output that reflects their research and learning		
Chapter 5 (pp. 77-79) Sharing the results of the research process Guidance on how to set up peer-to-peer activities for students using the digital outputs (online and offline)		
Conclusions (p. 81)		

In addition, each chapter provides further recommendations, suggestions and information in text boxes. Suggested classroom activities across the sections of this handbook, in the orange boxes, also provide different levels of difficulty: "foundation", "intermediate", "advanced" or "expert".

Orange boxes provide activities and didactic recommendations

Green boxes provide resources such as links or videos

Blue boxes provide definitions

Further definitions of key terms related to fake news can be found in the glossary of the "Reference Framework of Competences for Democratic Culture: Volume 1" (Council of Europe 2018b: 67).

About the Digital Resistance project

The development of technological structures in the course of a globalised digitisation has led to wide-ranging impacts on the societies of the 21st century. Possession of and access to information, as well as the ability to process it competently, have developed into central forms of social capital (Touraine 1971, Bell 2010).

Modern digital infrastructure opens up new possibilities for accessing information, but also allows users to create and publish information free of the technical restrictions that existed in the media landscapes of the past.

Distributing information of a political nature with the aim of manipulating or indoctrinating people, or to encourage discrimination against individuals or social groups, is not a phenomenon of the digital age. But the dynamic flow of information that is connected to this technological and social process works as a catalyst for the use of misleading information, disinformation or fake news aimed at particular political goals connected to discrimination or indoctrination.

Political concepts that rely on a mechanism of exclusion and aim at homogenous societies are mostly based on a nationalistic perspective and advocates also use digital channels to spread their agenda, even though traditional geographical borders are no longer of major importance for digital infrastructure.

The use of digital age tools to resist the spread of hatred and prejudice online is a transnational project per se, because it takes into account the global importance of protecting human rights that are permanently contested on the internet.

Existing political systems are struggling to find ways to regulate the digital space. Digital citizens act within an environment where trustworthy information and guidance is often hard to find. A parallel process to the political development of formal laws and principles for the digital sphere is the creation of educational frameworks for competences, since digital citizens need to act safely and proficiently while using digital tools.

The overall objective of the project Digital Resistance, funded by the Council of Europe and the European Union, is strengthening young people's competences in the field of media and information literacy and promoting Digital Citizenship Education in order to encourage students to be aware of their responsibilities as citizens in the digital space and to share their knowledge with other students.

The project focuses on strategies to detect, analyse and manage misleading information, disinformation and fake news online, which often leads to discrimination or indoctrination on the internet. The five partner organisations of the consortium have worked with teachers to design this module for students aged between 14 and 20 years.

Through enquiry-based methods, students learn to deal with the influence of (social) media on society and politics, question sources and their underlying motivations to deepen their media and information literacy, and develop counter-strategies to support democratic processes online. In order to reflect on and document their learning process, the students create media outputs in the form of videos, vlogs, blogs, short movies, posters, podcast episodes and online presentations. These media outputs have been published on the project's homepage and on social media platforms to stimulate peer-to-peer activities. Students can thus pass on their newly acquired knowledge, present their projects and exchange perspectives.

Sustainable implementation in the classroom is supported by teacher training offered by the consortium. In addition, the project team, which supports the schools throughout the project, developed the present handbook with background information, basic knowledge, lesson examples and advanced methods.

School education plays an important role in this context because digital competence in the individual can only be fostered with the support of qualified trainers/teachers and student-centred learning environments. It is necessary to offer different, up-to-date and personalised learning paths to children and teenagers so they can gain the ability to reflect on their online usage and behaviour. Every individual user needs to know about and develop the competences necessary to be an autonomous, creative and socially responsible digital citizen.

Digital Citizenship Education is a lifelong learning process that changes depending on age, employment, interest and other individual circumstances. For these reasons the efforts of schools, policy makers and education professionals should be coherent and co-ordinated, and should take account of the wide range of cultural differences and the variety of linguistic, technological and behavioural competences that characterise our societies.

To reach the above-mentioned goals of Digital Citizenship Education, all educational stakeholders (governments, educational institutions, trainers/teachers, schools and parents) need to work together. The development of a cross-curricula framework on media education on a national or European level as well as an up-to-date teacher training programme could be a first step in the right direction.

This handbook aims to support teachers and educators to promote media information and literacy, foster the correct behaviour for online communication and collaboration, and encourage the creation of reliable, truthful, respectful and original digital content. It was created in the course of the project and is freely accessible on the project homepage (www.digi-res.eu).

Introduction

The Council of Europe resources for developing competences to resist digital manipulation

Calin Rus

Council of Europe and digital citizenship

The Council of Europe pioneered efforts to promote safety in the online environment for children and young people before the development of today's influential social media platforms. A debate has been ongoing since that time on whether to focus on effectively regulating the online environment or on developing resilience to misuse of the internet. Guidelines for policy makers were drawn up and resources were developed for educators as well as children, so they could learn to keep themselves safe while using the internet.

The No Hate Speech campaign, initiated and led by the Youth Department of the Council of Europe, was also an important contribution to addressing challenges related to the online environment. The campaign started from the assumption that hate speech covers "all forms of expression", including speech and texts but also images, videos or any form of online activity. Cyberhate was therefore also considered hate speech. *Bookmarks – A manual for combating hate speech online through human rights education* (2014) emphasises the complexity of hate speech in the online environment and the difficulties that may arise in defining certain content as hate speech. It also makes it clear that online space is public space, and hence all the principles of a democratic society can and should apply online. In this context, the role of young people online is seen as extremely important in combating hate speech: "Young people are citizens online, which means they can express their aspirations and concerns online, take action, and hold accountable those who violate human rights online. What's more, they can be human rights defenders online" (Council of Europe 2014: 8).

Since 2016, the Council of Europe has moved beyond online safety and fighting online hate speech with a project on Digital Citizenship Education, led by the Education Department and aimed at promoting empowerment through education and the acquisition of the competences needed for actively participating in digital society.

Supporting children and young people to participate safely, effectively, critically and responsibly in a world filled with social media and digital technologies has emerged as a priority and the notion of digital citizenship has evolved to encompass a range of competences, attributes and behaviours that harness the benefits and opportunities the online world provides while building resilience to its potential harms and risks.

A conceptual model of digital citizenship has been developed, built around a set of 10 "digital domains" across three categories.

Being online	Well-being online	Rights online
Access and inclusion	Ethics and empathy	Active participation
Learning and creativity	Health and well-being	Rights and responsibilities
Media and information literacy	E-presence and communications	Privacy and security
		Consumer awareness

Below is a brief outline of what is implied for each of the 10 domains of digital citizenship.¹

1. The following text is based on the Council of Europe introduction to the 10 digital domains that can be found here: www.coe.int/en/web/digital-citizenship-education/digital-citizenship-and-digital-citizenship-education

Being online

Access and inclusion refers to overcoming different forms of the digital divide and opening digital spaces to minorities and different opinions.

Learning and creativity concerns the willingness to learn and the attitude towards learning through digital environments throughout life, and the capacity to develop and express different forms of creativity with different tools in different contexts.

Media and information literacy refers to the ability to interpret, critically understand and express creativity through digital media.

Well-being online

Ethics and empathy covers ethical behaviour in online interactions and the ability to recognise and understand the feelings and perspectives of others.

Health and well-being includes awareness of the issues and the opportunities that can affect wellness in a digitally rich world. Digital citizens inhabit both virtual and real spaces. For this reason, the basic skills of digital competence are not sufficient. Individuals also require a set of attitudes, skills, values and knowledge that render them more aware of issues of health and well-being.

E-presence and communications addresses the development of personal and interpersonal qualities that help digital citizens in building and maintaining online profiles of themselves and online interactions that are positive, coherent and consistent.

Rights online

Active participation refers to the competences that citizens need to be fully aware of how they interact within the digital environments they inhabit in order to make responsible decisions, while participating actively and positively in the democratic cultures in which they live.

Rights and responsibilities concerns awareness and understanding of rights and responsibilities in the online world.

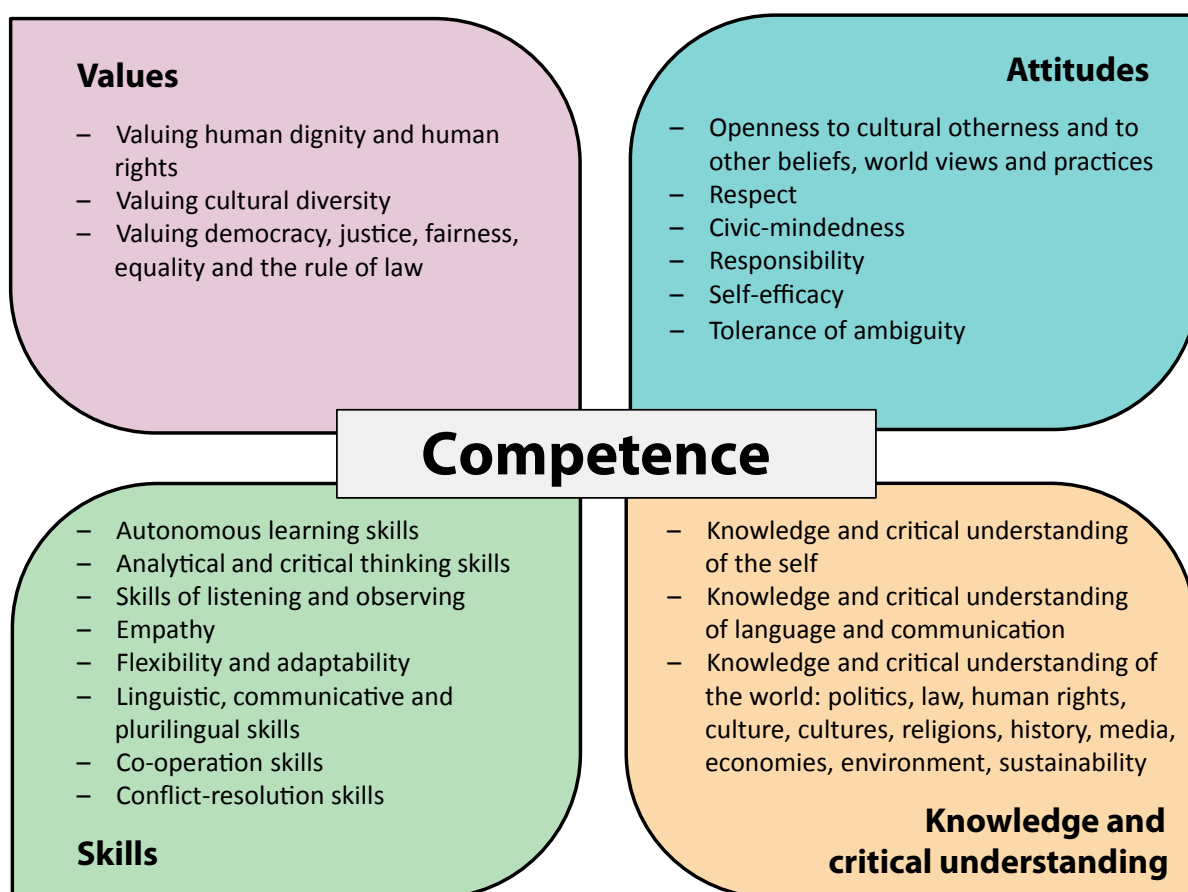
Privacy and security covers two different concepts: privacy concerns mainly the personal protection of one's own and others' online information, while security is related to one's own awareness of online actions and behaviour.

Consumer awareness starts from acknowledgement of the fact that in the digital world, including on social media or other virtual social spaces, being digital citizens means also being users – being consumers. Consumer activism can push businesses to align themselves with core values such as environmentally friendly business practices or support of the local economy.

Competences for democratic culture

The conceptual model of digital citizenship builds directly on another flagship product of the Council of Europe's work over the past few years: the Reference Framework of Competences for Democratic Culture (RFCDC). The Reference Framework is built around a model of competences including the values, attitudes, skills and elements of knowledge and critical understanding that are needed for citizens to participate effectively in democratic and culturally diverse societies. Indeed, if the digital world is seen as a public space, with interactions, decisions, diversity, opportunities, threats, rights and responsibilities, then the same competences needed for citizens are also essential in the online environment.

The model of competences that represents the core of the Reference Framework is the result of a review of over 100 models of competence related to democratic participation, human rights and intercultural competence. It consists of 20 elements, grouped by values, attitudes, skills, and knowledge and critical understanding.



There are two structural aspects that differentiate this model of competence from many other models.

The first structural specificity is that while most competence models include knowledge, skills and attitudes, this model also includes values. The decision to include values in the competence model was accompanied by extensive debate, particularly in the consultations organised with researchers, practitioners and policy makers while the model was being developed. It was agreed that all elements of the model needed to be “teachable, learnable and assessable”. Thus, during a hearing focused on the assessment of competences for democratic culture (and on other occasions), questions were raised as to the legitimacy and feasibility of teaching and assessing values in a formal education setting. Despite animated discussions on this topic, and the various perspectives articulated by different groups of education professionals from different countries, it was agreed that including values in the model was important. Therefore, the section of the model referring to values includes three elements reflecting the key values of the Council of Europe: democracy; human rights, with their recognised source, human dignity; and the rule of law, associated with justice, fairness and equality, as well as cultural diversity. These values are the same as those included in Article 2 of the Treaty of the European Union and in the Charter of Fundamental Rights of the European Union.

The second specific element in the structure of the model of competences for democratic culture is the fact that knowledge is systematically associated with critical understanding. This means that the accumulation of knowledge is not seen as important in itself, but only to the extent to which it supports critical understanding, and allows interconnections and meaning. This is closely related to the use of analytical and critical thinking skills. There are three areas of knowledge and critical understanding included in the model, referring to self, language and communication and certain aspects of the world, including politics, law, human rights, culture, cultures, religions, history, media, economies, the environment and sustainability. There is a close connection and complementarity between knowledge and critical understanding of language and communication and the linguistic, communicative and plurilingual skills.

There are also six attitudes in the model of competences and eight skills, with autonomous learning skills and linguistic, communicative and plurilingual skills being of a more general scope but with key importance for effective participation in a democratic and culturally diverse society.

For some of the 20 elements of competence, the meaning is relatively clear from the diagram above. For others, it is essential to look at the way in which they are defined in the Reference Framework to understand their meaning in this context. The bank of competence descriptors included in the second volume of the Reference Framework of Competences for Democratic Culture is also a valuable tool that aids at grasping the actual meaning of each element of competence and recognising how they translate to actual observable behaviour, offline and online.

In addition, the recommended order of listing the elements of the model, starting with the values, continuing with the attitudes and skills, and ending with knowledge and critical understanding, emphasises the importance of values and attitudes.

The elements of competence included in the model are usually mobilised and deployed in clusters, depending on the specific situation. For example, a successful intercultural encounter implies valuing cultural diversity, along with manifesting openness to cultural otherness, respect, tolerance of ambiguity and civic-mindedness, as well as the use of linguistic skills, listening skills, critical thinking and empathy. This is also valid in the digital environment, with a combination of elements of competence mobilised in the context of a specific online interaction or behaviour.

Competences needed to resist digital manipulation or indoctrination

A person with high proficiency in all the elements of the model of competences for democratic culture is more likely able to resist attempts at manipulation or indoctrination in the online world. Manipulation may include disinformation, misinformation, or acceptance and support of discourses promoting racism, intolerance and discrimination.

Manipulation, that is attempts to influence people’s beliefs, attitudes and behaviours, is not new and is not specific to the online environment. Historically, education systems aimed at cultural homogenisation, and the creation of loyal citizens, often indoctrinated with ethnocentric ideas. Manipulation is often carried out through public institutions; by politicians and the mass media, who control or influence the public agenda and voting patterns; or the advertisement industry, to develop and influence consumer attitudes and behaviours. All this can now be accomplished in the online environment as well.

Computer applications and online platforms are often designed to exploit the rules of psychology to get people to do things they might not otherwise do. They also, by design, encourage addiction by providing easy answers to basic human needs for connection, approval and affirmation, as well as exposure to rewards on a variable, unpredictable schedule. Manipulation taps into people’s natural fears, such as the fear of missing out or the fear of uncertainty and difference. Digital technology may limit people’s capacity for making free choices as well as their range of opportunities for interaction and access to information.

The RFCDC provides an analysis of a type of manipulation very common in the online environment: manipulation that leads to the adoption of radical perspectives, leading to violent extremism and terrorism. A similar analysis can be done with regard to other types of negative messages transmitted online and the varying ability of people to resist such messages.

What a competent person can do:	What a person lacking the necessary competences may do:
<ul style="list-style-type: none"> ▶ critically analyse, evaluate, challenge and reject biased communications, propaganda, misinformation and disinformation; ▶ understand the complexity of social and political issues, and accept that these issues cannot always be adequately addressed through simplistic responses or solutions; ▶ imaginatively apprehend, understand and appreciate the beliefs, perspectives and world views of other people, and recognise that other people’s perspectives may be just as valid as their own when viewed from their position; 	<ul style="list-style-type: none"> ▶ accept in an uncritical way and believe messages received without checking or challenging them; ▶ promote or support simplistic “us versus them” arguments, overgeneralising and lacking nuanced reasoning in their thinking; ▶ look at the issue from a single perspective related to the group(s) to which they belong, considering it the only legitimate point of view;

<ul style="list-style-type: none"> ▶ understand and appreciate how non-violent democratic means are more effective tools for the peaceful expression of citizens' views and opinions, managing differences of opinions, and pursuing political and social causes; ▶ value human dignity, human rights, cultural diversity, democracy, equality, fairness, justice and the rule of law; show openness to cultural otherness and to other beliefs, world views and practices; and show respect for people who do not share their views, as long as they recognise human dignity and human rights. 	<ul style="list-style-type: none"> ▶ accept, endorse or support unfair, exclusionary or even violent measures to address social issues or differences of opinions; ▶ value the rights of only certain categories of people, consider cultural diversity a threat, and consider it legitimate to take measures that go against the principles of democracy, equality, fairness, justice and the rule of law, as long as they benefit certain groups in society.
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The types described in the table above, of course, only point out some aspects and should be considered with caution. Indeed, sometimes populist politicians may pretend to uphold the values of democracy, justice, fairness and the rule of law while actually doing the contrary. They speak in the name of democracy but equate democracy with majority rule, and justify measures limiting the power of the opposition; controlling or threatening the judiciary; and reducing the influence of civil society with the legitimacy given to them by the popular vote. They also claim to be using critical thinking, pretending to have found flaws in the reasoning of the others, accusing them of manipulation, covering up reality and lying to the people, while they actually engage in manipulation by presenting one-sided arguments, ignoring facts and negatively labelling those who promote positions opposed to theirs.

The deconstruction of disinformation, misinformation, propaganda or populist messages requires skills in accessing and evaluating alternative sources of information, especially sources that provide alternative narratives. In addition, individuals need to be able to deconstruct the underlying motives, intentions and purposes of those who have produced the messages. This in turn requires the ability to understand and interpret the broader political and social context in which the messages have been produced. Following such critical analysis, individuals also need to be able to come to coherent conclusions.

Responsibility is also important in the online environment. A lot of harm can be done by simply sharing misleading, manipulative or false information, or opinions that go against the fundamental values included in the model of competences for democratic culture.

Responding to attempts at online manipulation is not just a matter of knowledge and skills, either. The fact that there are tools to check if something is true or fake does not necessarily mean that people are going to use these tools and the skills they have to deconstruct and respond to manipulative messages. Emotional elements may come into play and influence reactions and behaviours. Cognitive biases can limit the way we perceive and interpret messages. The confirmation bias, for example, encourages us to favour information that helps confirm our beliefs and ideas and ignore or discount information that challenges them. Biases can also limit concrete responses to problematic messages. For example, the bystander effect shows that it is less likely for someone to take action in support of a person in need, for example someone submitted to some sort of harassment or aggression, when this is happening in a public area, with others witnessing it. This effect is also visible in online public areas. This is why values and attitudes are extremely important.

This brief analysis shows that the full range of competences for democratic culture is necessary to resist attempts at online manipulation. Therefore, education systems across Europe have a clear responsibility to support the development of these competences. This was confirmed by the endorsement of the Reference Framework of Competences for Democratic Culture in the Final Declaration of the Council of Europe Standing Conference of Ministers of Education in 2016,² as well as in the Council of the European Union Recommendation on promoting common values, inclusive education, and the European dimension of teaching, adopted in 2018.³ This handbook proposes a practical approach that can contribute to the development of these competences, while also addressing directly and explicitly the issues of resistance to digital manipulation.

The Reference Framework of Competences for Democratic Culture provides an analysis of several educational approaches similar in many ways to that proposed by the Digital Resistance project. The proposed approaches emphasise elements of the model of competences such as project-based learning, service learning and co-operative learning.

2. Available at www.conference-service.com/25_standingconference/documents/E%20MED-25-3%20Final%20DECLARATION.pdf, accessed 10 November 2019.
3. Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018H0607%2801%29>, accessed 10 November 2019.

The following sections present a similar analysis of the way in which competences for democratic culture can be developed through the three main stages of the Digital Resistance methodology: enquiry-based learning, creation of a digital output and sharing the results as part of a peer learning process. This analysis takes into account the descriptors of competences listed in the second volume of the Reference Framework of Competences for Democratic Culture, which users of this handbook are encouraged to consult during the preparation and design of educational activities.

Enquiry-based learning and competences for democratic culture

By engaging in the process envisaged in enquiry-based learning activities, pupils develop various clusters of competences that are part of the model of competences for democratic culture.

As this is a process based on research – on collecting, processing and analysing information – it is obvious that enquiry-based learning develops, first and foremost, analytical and critical thinking skills. It allows students to deconstruct media messages, compare and contrast them, and use criteria to identify elements that could indicate that they constitute fake news, manipulation, misinformation or disinformation. By the fact that the object of research is represented by media messages, the process also developed a critical understanding of the media, as well as of the topic of the messages selected.

However, the process involves much more than development of analytical and critical thinking skills and of critical understanding.

It is important to mention that such a research process stimulates students to reflect on their values. All three categories of values included in the model of competences for democratic culture are addressed, especially in the case of enquiry into certain topics that focus on sensitive issues involving threats to the human dignity and human rights of certain groups, cultural diversity in society, or controversial situations related to democratic practices, justice or the rule of law. Messages deliberately communicating false information may also raise the issue of evaluating fairness.

The enquiry-based learning process also supports the development of certain attitudes and skills. For example, civic-mindedness is developed through the attention given to subjects of public interest and the commitment to contribute to the public good in this context by revealing attempts at manipulation via media messages. But tolerance of ambiguity is also needed when various perspectives on the same situation or content are considered or when incomplete, ambiguous or inconsistent information is analysed. In this phase, students also need to show openness to other beliefs and perspectives on the world.

Autonomous learning skills and self-efficacy develop by virtue of the fact that pupils decide on the topic or materials to investigate, identify sources of information, check their reliability and organise by themselves the process of data collection and the research methodology. They also plan the whole process step by step and build on intermediary results to achieve an envisaged outcome.

Listening and observing skills are developed particularly in relation to the collection and analysis of information. Observation skills are needed, for example, when analysing images or visual elements related to the media messages that are being considered. Knowledge and critical understanding of the self, and of language and communication, are also important in this context.

Analysis also requires the development and use of empathy. Empathy is essential for understanding the motivations behind messages and their effects. Students need to understand how things look from other people's perspectives; they will have to consider the situation from the viewpoint of the authors of certain messages in order to uncover their real motives and goals, but also to understand the perspectives of members of groups that are portrayed in a negative way and the consequences of prejudiced and discriminatory messages.

Flexibility and adaptability are necessary throughout the process. If a certain research approach does not generate the expected results, an alternative approach will be adopted. Approaches to various sources of information or experts who are expected to provide guidance may have to be adapted in order to achieve the best outcomes possible.

Creation of a digital output and competences for democratic culture

The work students do to produce a digital output based on their research contributes substantially to the development of competences for democratic culture.

While this activity contributes to developing analytical and critical thinking skills and critical understanding of the media, especially through the decision students must make regarding the format, structure and content

of their digital output, it also develops the elements of competence related to language and communication: linguistic, communicative and plurilingual skills, and knowledge and critical understanding of language and communication. Students understand that it is important to design a digital output that conveys the message they consider important, which means finding the best way to formulate it using technology while also considering the intended audience and the context of communication. Further, they need to take into account language issues.

If the digital output is the joint product of a group of students or of the whole class, or if the digital outputs produced by individual students need to be combined into a coherent, common class output, then a series of specific skills must be mobilised. These include co-operation and conflict resolution skills, but also empathy, flexibility and adaptability.

The development of the digital output is also important for developing responsibility, especially with regard to considering the consequences of what is communicated through the digital output.

Peer-to-peer learning and competences for democratic culture

Sharing the digital output as part of a peer learning activity is a significant opportunity to use and develop various competences for democratic culture.

Many of the aspects mentioned in relation to the previous phases of the process also apply here. As students are focused on communication, skills and critical understanding related to communication, including listening skills, are obviously developed. But as this process implies an exchange or an interaction with peers, directly or indirectly, it also implies respect, empathy, flexibility and adaptability.

Also, at the end of the process, it is very important that teachers organise a reflection focused both on what was accomplished across various phases and on the outcomes and outputs. This reflection needs the active involvement of teachers to support students in developing awareness and in expressing their feelings and opinions. This will contribute to a better awareness of values involved, as well as increased critical understanding of the self and critical understanding of language and communication, and the aspects of the world addressed in the research, including the nature of various media. This is also a key moment for students to become aware of their self-efficacy, by emphasising what they were able to achieve and how they were able to have an impact on others through their digital output, and recognise their responsibility to take a stand against fake news and any kind of manipulation through media.

Why is it useful to focus on competences for democratic culture?

Being aware of the clusters of competences that are developed across the phases of the process is very important for teachers, for several reasons:

- ▶ teachers can keep the focus on learning and on the reasons why students are undertaking these activities. It is easy to be absorbed by the process, or to focus on the quality of the outputs, and lose sight of the main aim of what is being done, that is developing the competences that students need to resist manipulation and to support each other in developing resistance;
- ▶ teachers can be guided in the design and implementation of the activities and can emphasise specific aspects or provide additional opportunities for students to develop those competences for which they need more support;
- ▶ teachers can better support students in reflecting on and becoming aware of what they have learned, and formulate meaningful and effective questions;
- ▶ teachers can evaluate the activities and how they are guiding students with an awareness of the competences expected to be developed. They can learn and improve their practice for the future, maximising the effect of the module.

Chapter 1

“Fake news” – A challenge for democratic societies

Marlene Maier, Michael Simku and Johanna Urban (University of Vienna)

What can be expected from this chapter

In this chapter we would like to shed light on the phenomenon of “fake news” that lies at the heart of the Digital Resistance project. After discussing what is actually meant by the term, we take a closer look at the mechanisms behind the distribution of fake news and the role of visual misinformation, before introducing some of the counter-measures that are currently being discussed at different levels.

Which domains of digital citizenship are addressed in this chapter?

Understanding the way information is distributed throughout the internet is a central aspect of media and information literacy (Council of Europe 2018a: 2). Gaining this competence is important to be able to distinguish fake news from trustworthy information. In this chapter, media and information literacy describes the ability to understand the mechanisms behind fake news, based on an in-depth knowledge of the online media landscape.

What do we mean when we speak of “fake news”?

The topic of fake news has a key role in the Digital Resistance project and features prominently in this handbook. Therefore, it makes sense to shed some light on the complexity of the term “fake news” and come up with a definition that is useful for everyday work in the classroom and that leads to different ways of addressing this challenging topic with students.

Fake news is not a new phenomenon

Fake news is nothing new. It has influenced the way we inform ourselves about the world. Accounts through history show that fake news or propaganda has had an impact on people’s individual lives and on whole societies (Uberti 2016). Conspiracy theories or propaganda have long been used as a political instrument to manipulate people, create mistrust and exacerbate societal divides. Yet what has changed is the vast amount of misinforming and disinforming content and its rapid and far-reaching spread online, mostly through social media channels.

Activity

Fake news existed long before the internet. Can you and/or your students think of any historical events where disinformation played a crucial role?

- ▶ Try to find examples related to the current subject of study within your class to address the topic.
- ▶ Let your students do some research on such historical events and make them present their outcomes in class. For presentation methods, check Chapter 4 of this handbook.

Dealing with a contested term

What becomes evident as well is that the term “fake news” itself is highly political and as such, contested. On the one hand, it has been used to describe intentionally misleading information and news sources used mostly to present controversial and divisive topics discussed in public, such as the so-called “refugee crisis”.

Activity

The term “fake news” is contested and has been used in different ways. What do you and your students think of when you hear the term “fake news”? Discuss in class.

- ▶ Resources. For a collection of relevant historical events refer to the publication “A short guide to the history of fake news and disinformation” by Posetti and Matthews (2018). This is available for free through icfj.org
- ▶ Alternatively, check the additional resources on www.digi-res.eu.

On the other hand, it has been used as a rhetorical tool to discredit mainstream media that have reported critically (Wardle and Derakhshan 2017: 16; Tandoc Jr, Lim and Ling 2018: 138). Probably the most prominent example of the latter use of the term comes from US President Donald Trump, who has repeatedly linked CNN and other news agencies to fake news (Ross and Rivers 2018).

The role of the media in modern societies is being challenged. As Tandoc Jr, Lim and Ling (ibid.: 140) have noted, “News is supposedly – and normatively – based on truth, which makes the term ‘fake news’ an oxymoron”. But what is the actual purpose of consuming news? We would like to be provided with “reliable factual information” and “also rely on the news media for overall coverage” (Gelfert 2018: 87). At the same time, we are aware of the fact that there cannot be coverage of every single event happening around the world.

Activity

Discuss with your students

- ▶ What is the purpose of consuming news?
- ▶ What role do the media play in our modern (democratic) societies?
- ▶ How do journalists select a news item?

Journalists and media corporations select which events to cover and while they do so they ideally stick to certain rules or a framework that is transparent and comprehensible for their audience. Such codes of ethics can be found across the globe, as The Reynolds Journalism Institute and the Ethical Journalism Network document on their website, <http://accountablejournalism.org>.

Activity (Advanced)

Codes of ethics for journalism have been established around the world. An overview of different codes of ethics can be found at <http://accountablejournalism.org>. Examine them with your students. Pick different codes of ethics and hand out one example to each group of students.

Let the groups examine their example and afterwards present it in class.

- ▶ What do the presented codes have in common?
- ▶ Can your students come up with their own code of ethics?
- ▶ Which points should be in there and which ones should be left out?

Additionally, you can watch the video below with your students to spark discussion.

“The 5 core values of journalism”, a video by the Ethical Journalism Network: www.youtube.com/watch?v=uNidQHk5SZs.

At the same time – while sticking to ethical rules or a certain framework – reputable news corporations will follow a certain stance or world view that becomes visible in their commentaries, authors and selection of topics, as well as their audience. It is in providing this variety of news and information sources that the media play an important role in creating a democratic “public sphere” that allows open debate as well as the incorporation of different opinions and world views. While in history newspapers and other forms of media have also been used as a tool for manipulation, distortion or bias (Gelfert 2018: 90), and in this sense were used to

threaten democratic societies, we are currently experiencing a new phenomenon. Agents driven by a political or economic agenda but pretending to serve quality news gain power and with the spread of fake news have an impact on agenda setting. At the same time, established media pressured by the changing media landscape come under criticism. In this context, Farkas and Schou suggest that the term “fake news” is “part of political struggles” (2018: 4) that challenge democratic structures.

Should we call it “false news” or “disinformation” instead?

The expression “fake news” is disputed and some have suggested using other terms such as “false news” or “disinformation”.

Some experts would like to replace the term “fake news” because of its use to attack critical journalists. Furthermore, they consider it as too vague and not suited to capturing the complexity of the issue (Wardle and Derakhshan 2017: 15 ff.; High Level Group on fake news and online disinformation 2018: 10). Facebook has pointed out that the term “fake news” is problematic due to the catch-all nature of the phrase, and has therefore started using the term “false news” instead (Weedon, Nuland and Stamos 2017: 4 ff.). Many researchers and experts also use the term “disinformation” to refer to the intentional spread of false information (Farkas and Schou 2018: 3).

“Disinformation”, as defined by the High Level Group on fake news and online disinformation that was set up by the European Commission, is:

“false, inaccurate, or misleading information designed, presented and promoted to intentionally cause public harm or for profit. The risk of harm includes threats to democratic political processes and values” (High Level Group on fake news and online disinformation 2018: 10)

For some, fake news constitutes pieces of information that have no factual basis (Allcott and Gentzkow 2017: 5). But quite often it is the case that what we call fake news is not necessarily all made up.

“Many fake news stories are not wholly false, but mix deliberate falsehoods with well-known truths as a means of obfuscation.” (Gelfert 2018: 99 ff.)

Another commonality that is often pointed out is intentionality: the creation and spread of fake news takes place intentionally to misinform for economic or political reasons.

Ultimately, the term “fake news”, in itself and its use, is contested. For a clearer understanding of the types of information we are actually referring to when speaking of fake news, we will now analyse examples and see what they might have in common. Practical guidelines for the work in class can be found in Chapter 2.

Narrow versus broad definitions of online disinformation

We can identify a narrow as well as a broad definition of fake news: narrow definitions put forward amongst others by Allcott and Gentzkow (2017: 4) and the European Commission (2018a: 3) refer to “fake news” or “online disinformation” as only verifiably false news: news that verifiably has no factual basis. This is an especially relevant definition for research as it allows for a certain capacity for measuring fake news. Furthermore, social networks often work with this definition, as can be seen through their fact-checking approach (Martens et al. 2018: 10 ff.). These narrow definitions often exclude satire, parody, conspiracy theories, rumours, partisan news and the like. But several types of information that are excluded by this narrow definition have also been referred to as fake news in the past, such as fabrication, manipulation, news satire, news parody or propaganda (Tandoc Jr., Lim and Ling 2018: 137). In addition, the term has not always had a negative connotation (Gelfert 2018: 92).

Satire and fake news – it’s complicated!

Until several years ago, fake news was often used to refer to news satire, where events would be reported on in a recognisably satirical manner with the aim to entertain but also to educate citizens. In the case of shows such as *The Daily Show* or *Last Week Tonight with John Oliver*, “humour is often used to provide critiques of political, economic or social affairs” (ibid.: 141).

Activity

Discuss with your students

- ▶ Have you ever encountered a piece of news parody, which you and/or your friends and/or family believed to be true in the first place?
- ▶ Where did you encounter this piece of information?
- ▶ When did you find out it was not true?

Research

- ▶ Give your students time to find examples online. Take a look at them together.

Activity (Advanced)

Watch an episode of a TV show

- ▶ Which news satire shows do your students know?
- ▶ Watch an episode with your students, e.g. *Last Week Tonight with John Oliver*, which is available on YouTube: www.youtube.com/user/LastWeekTonight.
- ▶ What do your students think of these shows? Do they like them? Why yes/why no? Why are these shows so popular?
- ▶ As homework you can ask your students to choose an episode, provide an outline and discuss the questions above in the form of a short essay.

Tandoc Jr., Lim and Ling (2018: 142) distinguish news satire from news parody, the latter being completely made-up news that might refer to actual events in a fictive and humorous way. Examples would be *The Onion* in the United States, *Die Tagespresse* in Austria, *Lercio* in Italy or *Der Postillon* in Germany. As already noted, many researchers do not define satire or parody as fake news today. Yet this kind of “news” is based on an implicit understanding that the news is not true and therefore requires a certain amount of media and information literacy. The next chapter offers some suggestions on how to identify satirical content.

There have been cases where news parody has been believed to be true and at times even intentionally used to spread false information under the guise of “humour”. Reilly (2018: 143) speaks of hoaxing as a form of disinformation that is connected to humorous deception paired with the clarification that it was a “hoax” afterwards – though hoaxing also has a “nebulous standing”. Often hoaxes are shared widely and believed to be true. This is a particular problem if hoaxes target a certain societal group because the clarification that it is a hoax is simply not shared as often. The term “hoaxing” has also become contested lately, with victims and witnesses of events such as terror attacks being accused of being actors. A case study is that of the German journalist Richard Gutjahr.

The case of Richard Gutjahr

Witnessing the 2016 Nice terror attack and covering a shooting in Munich for German public TV a few days later was enough to make Richard Gutjahr the target of excessive online harassment and a wide array of bizarre conspiracy theories that accused him of playing a crucial role in these events.

To find out more, watch Gutjahr speak at hub.berlin: www.youtube.com/watch?v=YolPxLQx_zo.

Another way of using the term “fake news” is linked to news fabrication, meaning the production of “articles that have no factual basis but are published in the style of news articles to create legitimacy” (Tandoc Jr., Lim and Ling 2018: 143). Their purpose is to disinform. Additionally, many made-up articles draw on other unreliable sources. In this way, websites that are dedicated to the fabrication of false news either hyperlink each other, get shared through social media – especially through circles of friends and acquaintances or partisan accounts and sites – and in the end are perceived as legitimate news sources. Further authenticity is created by imitating the appearance of news websites. Fabricated news feeds on social tension and can contribute to further societal polarisation (ibid.: 143).

A regularly updated list of “fake news” websites can be found on Wikipedia: https://en.wikipedia.org/wiki/List_of_fake_news_websites.

While news fabrication may be politically motivated, propaganda is also a form of disinformation that is created through a political entity to influence public opinion – mostly in favour of specific policies, products or plans (ibid.: 146). Propaganda is not necessarily covert: it can also be transparent (Reilly 2018: 141). Often, feelings of belonging are fostered by creating animosity against other groups or nations. Propaganda does not require completely made-up stories but can work through one-sided, often subjective reports that are labelled as objective pieces of information (Tandoc Jr., Lim and Ling 2018: 146). For example, the state-funded TV station Russia Today, broadcast to many countries and in many languages, has been criticised for following a propagandistic approach (Shuster 2015).

Conspiracy theories (such as flat-earth theories or anti-vaccination theories) also touch upon the issue of fake news. Fuelling prejudices and stereotypes, they have been around for a long time and still circulate online, reaching a larger audience than ever before. Often, fake news stories also build on conspiracy theories to spread hatred towards certain groups of people.

Activity (Intermediate)

Research

- ▶ Which conspiracy theories can you and your students think of?
- ▶ What are their characteristics?
- ▶ What is the intention behind conspiracy theories?
- ▶ Why do you think people believe such theories?

Compile a list of different conspiracy theories with your students, and let them carry out research and answer the questions above through the examination of one of these theories.

Another form of disinformation takes place through the manipulation of photos or other media. With media digitalisation, it has become easier to manipulate photos, videos or audio files. Ideally, professional journalists stick to certain codes of conduct while using or editing photos, for example the Reuters code of ethics on image manipulation. Particularly for social media, there is a need for the uptake of rules for the use of media (Tandoc Jr., Lim and Ling 2018: 144). In this context, “deepfakes” have also led to discussions on the power of audiovisual disinformation.

Deepfakes are:

“[T]he artificial intelligence-powered imitation of speech and images to create alternative realities, making someone appear to be saying or doing things they never said or did.” (Khalaf 2018)

The website www.thispersondoesnotexist.com displays photos of faces. As the website’s name already reveals, the photos are not real – they are based on machine learning.

Defining the term “fake news” also means considering the economic side: profit-based disinformation. The economic dimension often goes hand in hand with other forms of disinformation like manipulation for political reasons, but the main motivator is financial gain (Tandoc Jr., Lim and Ling 2018: 145ff.). “Clickbaiting” is the most prominent form, and uses sensational headlines to draw people to commercial websites that at a superficial level appear to be news websites.

In addition to the research of Tandoc Jr., Lim and Ling (2018), Wardle (2017) provides a categorisation of seven types of misinformation. This includes the use of “false connections” where “headlines, visuals or captions don’t support the content”; “false context” where authentic information is shared in a wrong context, the misleading use of information “to frame an issue or individual”; and the manipulation of pictures.

How do we decide on an operational definition for the project and handbook?

What all these forms of mis- and disinformation have in common is their intention of “hacking the attention economy” (Reilly 2018: 143). Within the Digital Resistance project and this handbook we refer to “fake news” as a challenge for democratic societies – be it the intentional production of fake news to harm certain groups and to foment prejudices or the intentional discrediting of journalists.

In this sense, we follow a broad approach that takes into account different types of disinformation that have been outlined above and sheds light on their implications for the political sphere and society as a whole.

Such a broad approach towards the topic of fake news is useful for everyday work in class since it offers many points of contact for Digital Citizenship Education and the 10 domains identified by the Council of Europe (2018a) as well as the strengthening of competences for democratic culture (Council of Europe 2018b).

Mechanisms behind the production and dissemination of fake news

As we have addressed the complexities connected to the term “fake news” and outlined how we propose to address them in the classroom, we would now like to examine the mechanisms behind the production and dissemination of fake news and other forms of disinformation. This means not just studying the formal content, formats and strategies, but also the contexts and information environments in which they circulate in our digital age (Bounegru et al. 2018). Therefore, we consider transformations within the global media landscape as well as economic, political and social factors. Furthermore, we want to explore the technological dimensions of the topic to gain a deeper understanding of how we consume information.

Changing media landscape

The information environment in which fake news is created and disseminated is a media landscape undergoing substantial change. As Wardle and Derakhshan observe: “While we know that mis-information is not new, the emergence of the internet and social technology have brought about fundamental changes to the way information is produced, communicated and distributed.” (2017: 11) With the shift from traditional newsprint to online journalism, the speed and volume at which information is disseminated has increased rapidly, resulting in the rise of digital news websites competing for readers and their lucrative attention. To secure readership, established journalists have to produce work under tighter and tighter deadlines, often up to several articles a day (Reilly 2018: 144). Furthermore, as information goes viral in real time between friends, family and other people we tend to trust, any piece of information is far less likely to be challenged. Because of social media, the once-private consumption of information has become public. At the same time, cheap yet sophisticated editing and publishing technologies allow anyone to create and distribute content (Wardle and Derakhshan 2017: 12).

Activity

Discussion

- ▶ Where do you read the latest news?
- ▶ How has the internet influenced journalism and the way journalists work?
- ▶ The internet allows anyone to create or distribute content. What are the pros and cons of this?

An investigation of news consumption shows that social media has become one of the most important sources of news for its users.

In a current study, 30% of respondents in Austria accessed news on Facebook, compared to 24% in Germany, 62% in Greece, 51% in Italy and 69% in Romania (Newman et al. 2018). A similar study finds that 68% of American adults state that they at least occasionally get news on social media, with 43% doing so on Facebook (Matsa and Shearer 2018).

Herrman (2016) argues that from a publisher’s perspective, Facebook seized the Web’s means of distribution by popular demand and social media became an intermediary between publishers and their audiences. Meanwhile, other messenger services or social media channels like WhatsApp or Instagram have also gained importance. For a social media user, a vast array of sources is now processed through the same interface. From a journalist’s perspective, emerging fields of tension between established standards and technology, and between editorial autonomy and the growing influence of the audience have affected the quality of the information they produce. Having to increasingly focus on the dissemination of the content they produce, journalists find they have become marketers of their own work rather than “gatekeepers” (Tandoc Jr. and Vos 2016: 962ff.).

Digital information market

To survive in this competitive environment, established newsrooms as well as digital news sites rely on the maximisation of traffic, which in turn generates advertising revenue (Ghosh and Scott 2018: 3). In this “stepped-up competition for readers, digital news sites are increasingly blurring the line between fact and

fiction" (Somaiya and Kaufman 2013), as publishing sensational, polarising content, verified or not, drives the attention of their audiences and with that, revenue.

Professional media organisations face different challenges connected to the changing media landscape, such as decreased subscriptions to their print products, since we consume more and more information online. Consequently, advertising on their websites and the aim of attracting a large number of online visitors is becoming more important. This can have an impact on quality and reliability:

"Truth and veracity become liabilities in the march toward securing greater and greater page views. Perhaps, the most fitting motto for accuracy in reporting seems to be 'publish first, correct if necessary.'" (Reilly 2018: 144)

This poses a problem, since we tend to remember the false information that was published first better than the corrected version (Roßnagel et al. 2017: 7).

On the other hand, global media and technology companies like Facebook, Google and Twitter have been at the centre of concerns regarding the unprecedented control they exert over their users' data. Their engagement "with digital content – including ads, page likes, clicks on individual search results, or interactions with news feeds – can be recorded and compiled into behavioural data profiles, which can further empower these companies to target individual users with the content and ads most relevant to them" (Ghosh and Scott 2018: 6). The practices behind algorithmic tailoring and customisation to target ads more effectively have long been a commonplace in the field of digital marketing, but the exploitation of these technologies for political campaigning has only recently become a focal point for mainstream media coverage and public scrutiny (ibid.: 2).

Where does fake news originate?

In order to analyse examples of what they call "information disorder", Wardle and Derakhshan suggest exploring three key elements: the agents who create, produce and distribute the message; the characteristics of the message itself; and the interpreter who receives the message (2017: 22).

A growing range of actors is shaping the shift in the information environment. As the digital transformation of the market affected the quality of news and increasingly blurred the line between fact and fiction (Somaiya and Kaufman 2013), many new actors entered the field. To provide a comprehensive picture of the forces at work, we need to take a closer look at their particular motives and incentives for sharing fabricated articles, manipulated photographs or "alternative facts".

A primary incentive for spreading false information is financial, as "fake news" websites that distribute polarising, emotional content make money through advertising. Typically, agents of disinformation have particular audiences in mind, and they often deliberately highlight differences and divisions, whether they are between supporters of different political parties, nationalities, religious groups or socio-economic classes (Wardle and Derakhshan 2017: 41).

The student from Veles

In 2016 it was revealed that a high school student from the North Macedonian town of Veles had created a network of pro-Trump websites, spreading false information in the run-up to the US presidential election. Many of these sensationalist articles were shared widely on social media and picked up by the right-wing media, earning the student US\$16 000 through advertisements for one website alone. In an interview, the student stated that his decision to favour Trump was purely economic, as his supporters were more likely to share the fabricated stories, earning him more revenue from advertisements (Subramanian 2017).

Wardle and Derakhshan note that "[f]abricated 'news' websites created solely for profit have existed for years ... however, the US election shone a light on how many of these sites are located overseas, but aimed at US audiences" (2017: 35), where this content spread rapidly and ultimately affected real-life politics.

To find out more, watch this clip from NBC News: www.youtube.com/watch?v=gOiHsYA03I.

A key example of how the inner workings of online media corporations can shape the political discourse is the Russia-backed disinformation campaign that interfered with the 2016 US presidential election. Facebook was forced to admit that it had sold more than US\$100 000 worth of advertisements to a Russian company that is suspected to have close ties to the Kremlin (Goel and Shane 2017); the campaign reached millions of users in the US. In May 2018, Democrat Party members of the House Intelligence Committee published more

than 3 500 of these Facebook advertisements.⁴ Even more advertisements and posts had been placed on Instagram (Martineau 2018). The content makes clear that trolls and automated bots were used to disrupt the public discourse on polarising issues like immigration and gun control through false and misleading articles, memes and advertisements (McCarthy 2017). The archive⁵ not only displays the published visual material, but also the number of clicks and the categorisation of each ad tied to user data, providing profound insights into the practices of ad targeting that have also been deployed with increasing frequency across Europe to influence elections (Wong 2018).

How does fake news travel?

The impact of algorithms on the distribution of news has been emphasised by many researchers and in light of recent political disinformation campaigns well covered by the media.

In order to filter and organise the overwhelming amount of available information, search engines and social networks have developed strategies to reduce content. Recording their users' online activities enables them to collect data about personal preferences, interests and attitudes, to then deliver highly tailored content to each consumer with the help of algorithm technologies.

Therefore, advertisers buy ad space on social media to promote their content. Automatised tools allow them to develop and optimise the visibility and reach of their campaigns, individually tailored to their target group's preferences (Ghosh and Scott 2018: 14). In this marketplace, all advertisers are essentially alike, whether they are pushing retail products, news stories, political candidates or disinformation. (ibid.: 3)

Activity

Timeline research

- ▶ Ask your students if they can think of examples where they have encountered the use of algorithms in their everyday lives.
- ▶ Anybody using social media apps or websites is confronted with ad targeting, so your students will also have advertisements in their social media timelines that are based on algorithms.
- ▶ Let them find examples within their timelines or stories on Instagram. Are the ads shown to them interesting? Is there anything surprising about them?
- ▶ This can also be an ongoing activity, where students can document the ads shown to them over a longer period of time. Have there been changes in terms of the ads that are shown to them? Either way, can they tell why?
- ▶ Additionally, you can compare the YouTube front page of two different students and analyse the differences.

This increasingly personalised distribution of information results in a feedback loop often referred to as “echo chambers” or “filter bubbles”, blamed for promoting “self-segregation into like-minded groups” (Deb et al. 2017: 6), as users tend to interact with like-minded individuals and engage with content that corresponds with their own world views (Herrman 2016). Users are more likely to see what their friends, family members and other trusted people share, and consequently tend to believe in familiarity rather than accuracy (Deb et al. 2017: 6). This is emphasised by an American Press Institute study (2017) that demonstrates that the news Americans trust on social media is less determined by who created the content than by who shared it. Wardle and Derakhshan (2017: 46) point out that “repetition is one of the most effective techniques for getting people to accept mal- and dis-information”, as it creates a sense of familiarity and suggests popularity. These strategies are exacerbated by the use of social bots.

Social bots are software applications that automatically like or share content on social platforms at a much higher rate than humans possibly could, or automatically create comments and messages.

Furthermore, cognitive biases in the minds of interpreters contribute significantly to the increased dissemination of false news (Martens et al. 2018: 43) and help to maintain an atmosphere of confusion and competing reality

4. Available at <https://democrats-intelligence.house.gov/social-media-content/social-media-advertisements.htm>, accessed 10 November 2019.

5. The archive can be found here: <https://intelligence.house.gov/social-media-content/social-media-advertisements.htm>, accessed 27 October 2019.

(Deb et al. 2017: 8). The discussion around the term “confirmation bias”, for example, investigates why people hold on to false beliefs once they have adopted a position and why it is so difficult to convince them otherwise. Psychological research has shown that this is rooted in directionally motivated reasoning that seeks information that reinforces preferences and prior attitudes and occurs frequently in emotional subject areas, such as politics and individual or social identity (Martens et al. 2018: 34). More information on bias-based behaviour that is also relevant for teaching the topic in class can be found in the following chapter of this handbook.

Activity

Find the bots

- ▶ Give a short introduction to the term “social bot”.
- ▶ Discuss with your students if they have already encountered social bots online and list examples on the blackboard.
- ▶ Let students do research online and find additional examples.
- ▶ Discuss the examples found. When can social bots be useful, and when can they be problematic?
- ▶ Watch a short video with your students to summarise the main points: “Social bots explained: how do social bots work?” www.youtube.com/watch?v=G0skVFvn5sk.

By investigating verified true and false news stories distributed via Twitter between 2006 and 2017, researchers have shown that fake news travels six times faster and further on social media sites: “falsehood diffuses significantly farther, faster, deeper, and more broadly than the truth in all categories of information” (Vosoughi, Roy and Aral 2018: 1). A serious ramification of the increased spread of disinformation is a high level of mistrust and confusion among the public.

A closer look at visual misinformation

The potential impact of so-called fake news on the political climate and ultimately democracy is reinforced through the use of pictures, videos, charts and the like, as they are perceived as reliable sources and in this sense serve as tools to increase legitimacy. We will now take a deeper look at the visual features typical of contemporary disinformation campaigns.

Fake websites spreading dubious information are an obvious place to start. In terms of the sheer volume of views and clicks, they played a major part in the 2016 US presidential election, using meaty headlines propelled by the attention-favouring algorithms of search engines and social media channels. According to Allcott and Gentzkow, “[o]f the known false news stories that appeared in the three months before the election, those favouring Trump were shared a total of 30 million times on Facebook, while those favouring Clinton were shared eight million times” (2017: 2).

Typosquatting

Articles that popped up on social media feeds led to sites named ABCnews.com.co, Bloomberg.ma, Breaking-CNN.com, cnn-trending.com, Fox-news24.com, NBCNews.com.co and washingtonpost.com.co, among others. This phenomenon is called typosquatting and involves the registration and use of wrongly spelled versions of popular web domains (Giles 2010).

Originally, “typosquatting” was mostly used to generate advertising revenues from typos, but it reappeared in the context of fake news as a device to make the source of manufactured information appear more credible, particularly through the use of URLs that seem to belong to established media brands. This technique is widely popular with agents spreading disinformation to influence politics, and was also used by the North Macedonian teenage entrepreneur from Veles mentioned earlier (Subramanian 2017). However, these sites often go much further in their attempt to deceive readers and push their agenda.

Though many of these sites are ephemeral, some of the aforementioned URLs have led to complete impersonations of established media brands by posing as a similar but lesser known site, or even copying the original design, down to the corporate logo and typeface. A prime example in that regard is the *The Denver Guardian*, an example of a completely fictional web publication that branded itself as the oldest newspaper based in Denver and posted a story headlined “FBI agent suspected in Hillary email leaks found dead in apparent murder-suicide”, three days before the US presidential election. The article claimed that Hillary Clinton had

arranged the double murder of an FBI operative and his wife, although the alleged victims never existed in the first place. This story could have been debunked with minimal fact-checking, but instead it was shared 560 000 times on Facebook, where millions of voters were possibly exposed to it, just days before the election (Romano 2016). The hoax was hugely magnified by the appearance of the associated website, which used a deceptive name and a design that resembled that of the British newspaper *The Guardian*.

The screenshot shows the homepage of a website named "denverguardian". The top navigation bar includes links for PRIVACY, CAREERS, ADVERTISING, and SUBMIT YOUR NEWS, along with social media icons for Facebook, Google+, and Twitter. The main header features the "denverguardian" logo and a banner for "Save more. Shop Jet.com today." with images of cleaning products. Below the header is a secondary navigation bar with links for HOME, LOCAL, NATIONAL, OBITUARIES, HOROSCOPES, CONTACT, and ABOUT.

The main content area is titled "NATIONAL" and features a large headline: "FBI AGENT SUSPECTED IN HILLARY EMAIL LEAKS FOUND DEAD IN APPARENT MURDER-SUICIDE". Below the headline, it says "DG STAFF" and "SHARE ON:" with icons for Facebook, Twitter, and other social media. A photograph shows firefighters at night, with a building on fire in the background. The caption reads: "Walkerville, MD – An FBI agent believed to be responsible for the latest email leaks 'pertinent to the investigation' into Hillary Clinton's private email server while she was Secretary of State, was found dead in an apparent murder-suicide early Saturday morning, according to police."

Below the photo is a "BREAKING:" section with the headline: "PRESIDENT OBAMA TO ISSUE HILLARY A 'BLANKET PARDON' TO AVOID FUTURE PROSECUTION".

On the right side of the page, there is a "SUBSCRIBE" section with a form to enter an email address and a "SUBSCRIBE" button. Below that is a "WEATHER" section showing a forecast for Saturday (Clear, 0% precipitation), Sunday (Partly Cloudy, 0% precipitation), Monday (Clear, 0% precipitation), and Tuesday (Clear, 0% precipitation).

At the bottom of the page, there is a Grammarly advertisement with the text: "Be the best writer in your office. Grammarly is your secret weapon. Shhh...we won't tell anyone. Get Grammarly It's free".

Screenshot of the website denverguardian.com, as accessed through Wayback Machine (<https://archive.org/web>).



Screenshot of the website denverguardian.com, as accessed through Wayback Machine (<https://archive.org/web>).

Fake news websites, like the example above, incorporate elements such as a weather forecast, a faked “about us” section or subscription services to appear authentic.

Discussions on fake news revolve mainly around written language, but image-based communication is a constantly evolving and significant part of our daily information diet. Forms of visual communication including photos and videos but also graphics or the data visualisations are a ubiquitous part of our social media feeds or news sites. But are we good at interpreting such visuals?

Activity

Discussion

- ▶ Have you ever encountered manipulated visual material such as photos or videos?
- ▶ In which context did you encounter this content?
- ▶ Were you able to detect it right away?
- ▶ How can you detect manipulation of photos or videos?

Often disinformation builds upon decontextualised images or videos, as can be seen from the example in the next chapter. In this case, an image showing an alleged Libyan port with migrants waiting to set off to Europe, which turned out to be a photograph of a Pink Floyd concert in Venice in 1989, was shared thousands of times, fuelling anti-immigration sentiments.

There is also a depressing trend on social media whereby in the aftermath of traumatic events like mass shootings or terrorist attacks, forged or re-contextualised images of alleged victims, missing people or possible culprits are widely shared, exploiting the popularity of trending words or tags (Bell 2017). This approach has proved to be rather effective at sowing confusion and uncertainty, and is often used for humorous purposes, to attract attention or to initiate conspiracy theories.

Even in less emotional settings, we are not doing very well at dealing with faked photographs. A 2017 study found that only 60% of respondents could recognise manipulated photos of real-world scenes. An even lower number, a mere 45%, were able to identify the alteration even when they knew the image had been tampered with. The study goes on to suggest that images have a powerful influence on our memories and concludes, “if people cannot differentiate between real and fake details in photos, manipulations could frequently alter what we believe and remember” (Nightingale, Wade and Watson 2017). These findings weigh heavy in a world where everyone with a smartphone or cheap photo editing software can exploit these issues.

Mememes – more than humorous remarks

Image-based mememes are probably even more influential. As Bounegru et al. note, “successful hyper-partisan content, misinformation, disinformation and propaganda do not always look and feel like news pages with the familiar combination of headlines, pictures and text that we see in sites like the BBC, CNN and countless other outlets. In fact images, and particularly image-based mememes, circulate just as well (if not better) in social media ecosystems” (2017: 128).



The term “meme”, coined by evolutionary biologist Richard Dawkins in 1976, originally described small units of culture that spread from person to person through imitation (Shifman 2014: 2).

When we talk about memes today, we’re more likely to think of images combined with brash messages, typically printed over the visuals in a bold, white, all-caps font. The images used for meme-making are mostly appropriated without any regard to copyright rules from movies, TV shows, private social media feeds or news outlets, and subsequently re-contextualised to spread certain messages across the internet.

Shifman (ibid.: 14) describes them “as (post)modern folklore, in which shared norms and values are constructed”. Originally, memes were mostly used to spread jokes, but in recent times the joke has become very political. Memes have begun to play a significant role in democratic processes and political discussions around the world, from the US election to the rise of populist movements in Europe to Brexit (Guy 2017). A major reason for the effectiveness of memes is still very much their inherent humour. Detached irony, inside jokes, multi-layered cultural references and intertextual features have helped to popularise the meme as a communication tool. If memes were a mode of interacting that spread across various internet message boards, it was later hijacked by polarising and extreme political views. The rise of the so-called “alt-right” in the US, a xenophobic, radical, right-wing movement, was only possible because they didn’t spread their ideology through dull political tracts, but used memes and popular social media channels. In this way, they connected their ideas to the mainstream and made them appealing to young people (Nagle 2017). This development is mirrored in Europe by the Identitarian movement, which uses similar tools. The messages embedded in the memes are often ambiguous as to their seriousness, but they are nonetheless viewed and shared by millions and thus have great power to spread insidious messages.

As outlined in the last chapter, this visual practice was weaponised and used to tamper with the 2016 US presidential election by paid trolls suspected to have close ties to the Kremlin. In the run-up to the election, polarising societal topics were picked up and arguments strongly in favour as well as directly opposing views were injected into the mainstream simultaneously. This was driven by the use of memes spreading messages to the social media feeds of people potentially receptive to their content.

The role of algorithms in audiovisual manipulation

As discussed earlier, algorithms play a major role in organising, ranking and tailoring information that circulates online, but they will play an even bigger part with the growing impact of faked video and audio content of real-life people that we refer to as “deepfakes”.

Deepfakes can be described as neural networks that can be trained to guess the various positions of a person's facial expressions. With enough video footage to feed the neural network, it can learn to simulate the movement of a face synced with speech or bodily movement (Quartz 2018). The “deepfake” phenomenon is named after the user U/Deepfakes of the social network Reddit, who first started posting manipulated videos using deep learning software in 2017 (Adjer et al. 2019, 3). Now basically anyone with an internet connection can make use of this technology as there are user-friendly applications that simplify the process of swapping people's faces in videos (Zucconi 2018).

“Fake videos of real people and how to spot them”, a TED talk by Supasorn Suwajanakorn, available at: www.youtube.com/watch?v=o2DDU4g0PRo.

As featured in this TED talk, a group of researchers from the University of Washington took audio files and combined them with realistic-looking mouth movements, then transposed them onto existing videos of former US President Barack Obama (Vincent 2017). Another approach, developed at Stanford University, makes it possible to transfer the facial movements of one person, captured on live video, onto another person's face, in a real-time video. Users of this technology can therefore map any facial expression onto anyone's face, at least if enough video footage of that person exists (Thies et al 2016: 1). Similar technologies are being developed to manipulate spoken language. Companies like Adobe or Lyrebird are working on morphing software for the human voice. Text-to-speech applications aim to create realistic simulations of human voices (Solon 2017).

A combination of synthesised video and audio content could bring fundamental changes to news reporting as we know it. Once spread, shared and viewed countless times, such videos could have devastating effects, whether they are debunked or not.

In the future, the significance of journalistic articles, images, videos and even the human voice as evidence to determine factual truth could be nullified with the emergence of easy-to-use applications and communication tools that enable anyone to produce convincing forgeries. This is a possibility that casts a shadow of doubt on any kind of evidence, manipulated or not. These developments will make the work of journalists increasingly hard and could pose major challenges to democratic institutions such as courts, restricting the use of images or recorded spoken words as evidence.

For more examples see:

“Politicians fear this like fire. The rise of the deepfake and the threat to democracy”, available at www.theguardian.com/technology/ng-interactive/2019/jun/22/the-rise-of-the-deepfake-and-the-threat-to-democracy.

Acting against fake news

A number of counter-measures to stop or at least minimise the damage of fake news are being discussed and developed. In the next chapter we will present some of these ideas and approaches as well as the actors and sectors involved.

How can media professionals counter the spread of fake news?

One area that is widely affected by the spread of fake news, and that is viewed with increasing mistrust, is journalism itself. In this context, the Austrian journalist and expert on hate speech and fake news, Ingrid Brodnig (Panorama – die Reporter 2016), emphasises that established journalists should act as transparently as possible. People need to understand the standards and ethics applied while reporting on events. This includes explaining why not all events are reported on.

For example, the German newspaper *Die Zeit* has set up the transparency blog *Glashaus*, where the editorial staff reflects on their journalistic practices. Other media like the *Wall Street Journal*, *BuzzFeed* and *The Guardian* have integrated features into their websites that help readers explore alternative viewpoints. Another example would be the website *AllSides*, which aims to make visible the different perspectives reflected within the media landscape (Wardle and Derakhshan 2017: 55 ff.).

Another big issue related to journalism and the rise of fake news is the question of how high-quality journalism will be financed in the future. Today, even established media companies are highly dependent on advertising revenues, and therefore clicks, which leads to a highly competitive media environment where articles and updates have to be published constantly instead of once every 24 hours, as was the case with daily printed newspapers. Due to the lack of time, fact-checking and quality control fall behind. As one part of the solution, it has been suggested that state funds for high-quality journalism be increased. Although some researchers doubt that this would stop the production and spread of fake news, they consider the introduction of quality signals for trusted news brands an additional measure that could “shift some advertising revenue back to these brands” (Martens et al. 2018: 51).

Counter-measures being discussed in the political arena

Apart from funding high-quality journalism, political actors are trying to find ways to combat the spread of online disinformation. In Europe, the discourse around tackling online disinformation is moving forward. The European Commission has proposed a set of measures with a mainly non- or self-regulatory character, such as the improvement of transparency around the production and proliferation of information and fostering the promotion of diversity and credibility of information (ibid.: 5). In October 2018, the Commission agreed on a self-regulatory Code of Practice with platforms, social networks and relevant actors in the field of advertising to counter the spread of online disinformation (European Commission 2019a). Furthermore, a so-called Rapid Alert System for addressing disinformation campaigns has been set up “where EU member states and EU institutions can share insights on disinformation and coordinate responses” (ibid.).

In its Action Plan against disinformation the European Commission identifies four pillars for action:

- “(i) improving the capabilities of Union institutions to detect, analyse and expose disinformation;
- (ii) strengthening co-ordinated and joint responses to disinformation;
- (iii) mobilising private sector to tackle disinformation;
- (iv) raising awareness and improving societal resilience.”

(European Commission 2018d)

While awareness is increasing within member states as well, only a few governments have passed laws to counter disinformation directly. In 2017, the German Bundestag passed the Network Enforcement Act – a law that aims to combat hate speech and fake news in social networks by forcing the platforms to remove inappropriate content more consistently. Civil rights groups, lawyers and data protection activists criticised the law for endangering the basic right of freedom of the press and freedom of expression (Wardle and Derakhshan 2017: 70). The European Commission is calling for a European approach to avoid fragmentation since misinformation doesn't stop at borders, and stresses that measures taken should not damage freedom of expression as a fundamental right (European Commission 2018b).

The Poynter Institute has set up a guide to anti-misinformation actions around the world that is updated on a regular basis. See: www.poynter.org/ifcn/anti-misinformation-actions.

The fear of censorship has led to other initiatives addressing the subject of self-regulation. The non-governmental organisation Article 19, for example, has suggested setting up a “social media council” on a national or international level that takes into account the expertise of different stakeholders, and that “could elaborate ethical standards” and “deal with content moderation issues” (Article 19 2018: 20) to tackle fake news and hate speech online.

Activity

Discussion:

- ▶ Who should take action to counter the spread of fake news?
- ▶ What are the pros and cons of regulation and self-regulation?
- ▶ Civil rights groups fear that through regulation, human rights such as freedom of speech might be challenged. Do you share this opinion? Why/why not?

Calling the private sector to account

The growing relevance of social media for the distribution of news raises a number of questions about their responsibility to minimise the spread of false information and hate speech. Following the revelations of coordinated disinformation campaigns during the 2016 US presidential election and, consequently, growing pressure from political actors and the wider public, the major social media companies announced initiatives to fight the rise of false information.

Among others, the following purposes are listed in the Code of Practice on Disinformation (European Commission 2018c):

- ▶ more thorough scrutiny of advertisement placements;
- ▶ transparency about advertising (political and issue-based);
- ▶ implementation of policies against misrepresentation;
- ▶ marking systems and rules for bots;
- ▶ improvement of findability of trustworthy content;
- ▶ empowerment of users with tools to discover trustworthy content and report disinformation;
- ▶ access to data for fact-checking and research in compliance with privacy regulations.

Facebook, which also owns Instagram and the messenger service WhatsApp, and YouTube, owned by Google's parent company Alphabet Inc., increased numbers of content moderators drastically. One of their key strategies is not to simply take down inappropriate content, but to make it less popular by limiting its circulation (The Economist 2018).

Further, Facebook announced that it would block ads from pages that spread fake news. If sites repeatedly share content that fact-checkers flag as false, they will no longer be able to use the platform for advertising (Lyons and Shukla 2017). To make advertising more transparent, Facebook also rolled out an extended authorisation process as well as the label "paid for by" to accompany political advertisements (Schiff 2019). According to Facebook's blog, Facebook and Instagram have filed several lawsuits in the US federal court in connection to the sale of fake accounts, likes and followers (Grewal 2019; Romero 2019). But criticism has not ceased: at the beginning of 2019 it was revealed that ad targeting that has also been used to spread fake news and hate on Facebook, Instagram and YouTube was still allowed to target groups of people that were interested in certain conspiracy theories or white supremacist ideologies (Dean 2019; Lorenz 2019; Wong 2019). Meanwhile, Instagram has also started to ban certain hashtags, for example in connection to anti-vaccination theories.

Another measure supported by the European Commission's Code of Practice is fact-checking. While Facebook has been testing this method for quite some time, fact-checking was also introduced on Instagram in 2019. Meanwhile, YouTube is testing it in India. Automated fact-checking is under development, and aims to train artificial intelligence to automatically detect malicious content. This could prevent fake content from being posted, or get it taken down immediately on social media platforms. Several initiatives are currently in development, but experts predict that it will take a while before real solutions emerge. According to Facebook, new machine learning models can also be deployed to detect deep fakes, but experts are concerned that the fast pace at which deep fake technology develops, changing the underlying algorithms, may limit effectiveness (Schwartz 2018). For more on fact-checking and how it can be implemented on an individual level, see the next chapter of this handbook.

However, tools that help human fact-checkers respond more quickly to disinformation could be available soon (Graves 2018: 7). Software developers have created browser extensions to identify, flag and label suspicious content (for example the B.S. Detector or Fake News Alert). As "fully automated fact-checking remains a distant goal" (ibid.), fact-checking remains labour-intensive and time consuming. This is a problem, since disinformation spreads fast, and the damage is already done once it has circulated online. Furthermore, those social media users who tend to be taken in by fake news the most also associate fact-checking services with untrustworthiness (Brandtzaeg and Følstad 2017: 71).

The initiative "Correct the record!", launched by the social web movement Avaaz, is asking social media platforms and especially Facebook to step up their game with fact-checking: according to the initiative, everybody who is confronted with an item of fake news within the respective networks should subsequently be presented with a corresponding fact-check through a notification and/or pinned post. Avaaz notes that only a small share of all people who have been exposed to disinformation subsequently contact post debunking services (Perrigo 2019).

In an attempt to strengthen news literacy, Facebook has also launched The Facebook Journalism Project, a collaboration with news organisations, publishers and the public to enhance the understanding and assessment of information. Within this framework, it has recently introduced a collaboration with the non-partisan education non-profit News Literacy Project, which has launched a virtual classroom for middle and secondary school students, teaching them about news and other information on the internet (Brown 2018).

Despite these initiatives, there is also criticism concerning the data collected by social media companies, since they restrict access to data referring to privacy concerns. In 2019, Facebook announced that it was working on a data-sharing infrastructure and will grant around 60 researchers access to its data (Schrage 2019). The impact of the measures taken by the platforms will be hard to assess as long as data is not fully accessible to researchers.

Civil society and non-governmental initiatives play an equally important role in tackling online disinformation. Various websites have been set up by individuals or independent associations that check stories circulating online, offer counselling or provide materials for educational purposes. Given that hate speech is often a consequence of targeted online disinformation, measures such as awareness campaigns and training on how to fight the spread of disinformation and hate speech on an individual level are important tools.

That education on an individual level is necessary when dealing with fake news and hate speech is also evident in light of the various competence models that have been set up by educational and political actors alike. As the 10 domains for Digital Citizenship Education that have been identified by the Council of Europe (2018a) illustrate, it is not only important to be able to interpret and understand information while online. It is also important to accept a diversity of opinions, try to understand other perspectives and be open towards minorities. In a democratic system, individuals can help address online disinformation and hate speech by participating actively and responsibly. To be able to do so, we have to constantly reflect on our rights as well as our responsibilities. Respect, empathy, human dignity, a critical understanding of the world and especially knowledge and critical understanding of language and communication – among others – help us to create and maintain a democratic culture (Council of Europe 2018b: 38).

Dealing with the topic of fake news at school is important on two levels: the detection and tackling of fake news requires media and information literacy, while at the same time involvement with the topic of fake news at school fosters media and information literacy.

Chapter 2

Digital competences to deal with fake news

Monia Anzivino, Marco Caiani, Emanuela Dal Zotto (University of Pavia)

Alexandra Berndt (CEM – Centro di Educazione ai Media of Pavia)

What can be expected from this chapter

This chapter offers an overview of the current situation of online media use among young people, followed by guidelines and classroom activities to deal with fake news effectively through the use of digital competences and skills.

Which domains of digital citizenship are addressed in this chapter?

The guidelines of this chapter address the domain of media and information literacy (Council of Europe 2018a: 2). This domain combines the ability to effectively use digital competences and skills along with a critical mindset towards news items from online sources. By following the guidelines, digital citizens learn how to confidently move within the online world, do research and take part in online discussions. These aspects are also connected to the domain of online rights and responsibilities (ibid.: 4), which includes the competence to be an active digital citizen by exercising freedom of expression while upholding ethical standards. Taking into account ethical and moral aspects within online communication also increases competences included in the domain of ethics and empathy (ibid.: 3).

Online media use of young Europeans

This section sheds light on the role of information and communication technologies (ICTs) in the everyday life of Europeans, in particular the internet use of young people aged 16 to 19.

Internet use has grown rapidly. In just five years, from 2012 to 2017, the proportion of Europeans (EU-28 countries)⁶ who use the internet daily increased from 58% to 72%.⁷ Young people between 16 and 19 years make an even greater use of the internet on a daily basis than the EU-28 population as a whole, at 92% in 2017, up from 85% in 2012.

The growth of internet usage has been encouraged by the development of more and more mobile devices, making it possible for users to be connected to the internet in any place and at any time.

The smartphone is the device most commonly used to connect to the internet: while in 2012, 53% of young Europeans (27% of all Europeans) used smartphones to go online, in 2017, 90% did so (63% of all Europeans). It is interesting to see the differences between the European countries and also within the five countries involved in the Digital Resistance project: almost all young people in Austria (99%) and Germany (94%) use smartphones to connect to the internet, and in Greece a large majority (88%) does so, while in Italy and in Romania the percentage of young mobile users is slightly lower (76% and 79% respectively). Growth has been very high for Romania, moderate for Germany, Italy and Greece, and less so for Austria, which already had very high usage levels.

6. Data were obtained or processed before the United Kingdom's withdrawal from the European Union.

7. <https://ec.europa.eu/eurostat/data/database>, accessed 20 October 2019.

How do Europeans use the internet? Thanks to the Eurostat survey (carried out every year in each European country to measure ICTs and their use),⁸ we can analyse the various contexts in which individuals connect to the internet.

Figure 1 shows some of the online activities performed by both the population as a whole and young people (16-19 years) in 2017.

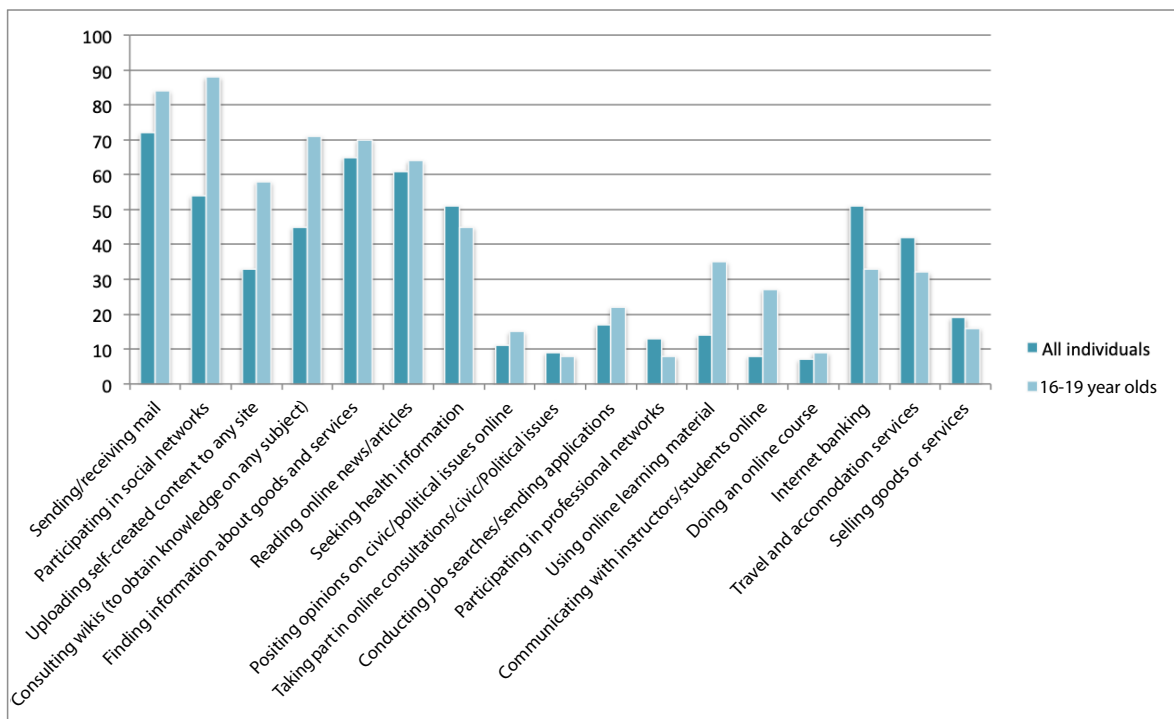


Figure 1. Internet activities by age group (%)

Source: Eurostat 2017

Young Europeans differ the most in their online activities from the rest of the population with regard to communication and learning processes. Over the three months prior to the interview, 58% of young Europeans uploaded self-created content online (such as photos, videos or text), 84% sent or received an email, and 88% connected to social networks (such as Facebook, Twitter and Snapchat). Despite the massive growth of the use of social networks among adults over the last few years (+20% from 2011 within the group of 25-64 year olds), the gap compared to young people is still very high.

Other activities register less difference between young users and the rest of the population. Using the internet as a source of information is an example: in the three months prior to the interview, 65% of the overall population and 70% of young people searched for information about goods and services; 61% of adults read or downloaded online newspapers while 64% of 16 to 19 year olds dedicated time to this activity; and 51% of adults looked up information about health online, compared to 45% of young users. An exception to this trend is represented by consulting wikis to obtain knowledge on any subject: this activity was very popular among young people (70%) while was related to a minority (45%) among the whole population.

Finally, the data about internet use as a channel for civic and political participation is particularly interesting: less than one sixth of young Europeans posted opinions on civic or political issues online (15%) and only 11% of the overall population did so. Even lower was the rate of participation in online consultations or votes on civic or political issues, at 9% for the overall population and 8% for young people.

As far as the five participating countries of the Digital Resistance project are concerned, it is important to point out that the data on participating in social networks, internet use as a source of information, and civic and political activities online indicate variations in patterns of online use.

8. https://ec.europa.eu/eurostat/cache/metadata/en/isoc_i_esms.htm, accessed 20 October 2019.

Italy and Romania are characterised by the lowest proportion of young people participating in social networks and seeking information online (coherently with the lesser use of the internet), even though young Italians and Romanians use the internet primarily for social networking.

On the other hand, Italy and Germany have the highest rates of youth civic and political participation online, even though such engagement is limited to a minority of people.

Table 1. Internet activities by age group and European country (%)

	EU		Germany		Greece		Italy		Austria		Romania	
	All	Young	All	Young	All	Young	All	Young	All	Young	All	Young
Sending/receiving mail	72	84	84	90	53	75	55	63	78	96	45	69
Participating in social networks	54	88	51	87	50	90	43	76	51	93	52	82
Uploading self-created content to any site	33	58	30	58	32	69	22	42	23	48	29	56
Finding information about goods and services	65	70	83	86	57	79	38	38	63	75	31	36
Reading online news/articles	61	64	67	62	61	72	39	41	63	75	44	48
Consulting wikis (to obtain knowledge on any subject)	45	71	66	84	34	65	38	65	57	81	17	34
Seeking health information	51	45	63	50	47	52	33	23	54	63	33	25
Posting opinions on civic/political issues online	11	15	13	17	9	8	13	19	5	4	7	10
Taking part in online consultations/votes on civic/political issues	9	8	12	9	4	2	6	7	7	3	3	2
Conducting job searches/ sending applications	17	22	18	32	15	17	13	11	12	28	8	7
Participating in professional networks	13	8	11	8	5	2	9	8	15	12	4	2
Using online learning material	14	35	14	32	3	4	11	33	17	51	13	29
Communicating with instructors/students online	8	27	6	14	3	7	9	31	7	17	4	13
Doing an online course	7	9	6	6	5	4	5	5	5	3	3	5
Selling goods or services	19	16	31	19	2	3	8	7	13	10	3	2
Internet banking	51	33	56	30	25	7	31	11	57	44	7	1
Travel and accommodation services	42	32	58	41	28	25	27	23	43	36	12	8

Source: Eurostat 2017

Interestingly, a Eurobarometer survey (European Commission, 2018e) shows that young Europeans (15-24 years) tend to have more confidence in traditional media (67% for TV, 72% for radio and 73% for printed newspapers and news magazines). Confidence in online information sources is lower (60% for online newspapers and news magazines, 46% for video-hosting websites and podcasts, 36% for online social networks and messaging apps), but is still higher than the trust in online channels expressed by the rest of the population (25 years and over).

Over three quarters (77%) of young Europeans aged between 15 and 24 state that they believe they come across a fake news item at least once a week. The same percentage says that they are able to recognise news or information items that misrepresent reality or are even false. Most (79%) consider fake news a problem for democracy, although compared with middle-aged groups, they seem less aware of this aspect.

When asked about the responsibility for spreading fake news, almost half of young Europeans (48%) think journalists should take action in this regard, but a significant proportion (39%) also feel responsible for the dissemination of fake news and believe that social media companies should play an active role in preventing its spread (ibid.).

The following statements summarise the importance of the internet for young Europeans:

- ▶ young people are always online, mainly thanks to mobile devices;
- ▶ young people use the internet mainly to communicate, primarily through social networks, and to find information about different topics – news, goods and services, as well as knowledge (through wikis);
- ▶ civic and political online participation is barely more widespread among young people than adults, and this is true only for activities related to posts containing one's own opinions and not for activities like voting or taking part in consultations, that is the higher youth participation is only for those activities related to the use of social networks;
- ▶ there are many differences between the five countries involved in this project, but these are more related to the differences in the development and spread of ICTs in general; in fact, the ranking of the leading online activities young people engage in is very similar across all countries;
- ▶ when it comes to information online, young people prefer to rely on information provided by the traditional media channels, but trust online media more than the rest of the population does;
- ▶ young Europeans are aware of the existence of fake news, and most believe they are able to recognise a fake news item.

These conclusions are particularly interesting for our purposes because the internet, and social networks in particular, are considered virtual places where fake news, dis- and misinformation are spread more easily and rapidly. As observed in the Strategy for a Better Internet for Children (European Commission 2019b) supported by the European Commission, young people are vulnerable to fake news while engaging with new ICTs and spending time online.

In the following sections, you are provided with strategic tools and didactic methods to foster digital competences in your students so that they are able to recognise and unmask the different forms of disinformation online.

Media and information literacy and critical thinking

Media and information literacy: competences of the 21st century

Digital competences and responsibilities are crucial requirements for democratic participation through creating, publishing and consuming content on the internet. Comprehension of the context in which fake news works and develops requires people to know how to interact in the digital world, which digital technologies are appropriate to share information and which behavioural norms, communication strategies and best practices enable one to protect one's own data and digital identity. This is particularly important for young people.

Young Europeans are always connected through different devices that characterise their daily existence. Devices that become more and more mobile (e.g. handheld devices, wearable technologies), customised (e.g. the Internet of Things, artificial intelligence and virtual assistants), and convergent (increasing the possibility to access and manage different media and content through the same device) interact with an environment that is transforming itself across a widespread and pervasive digital interface – we can think of smart cities and how ICTs are involved in the design of public places such as schools, stores, museums and public services.

Being a citizen in this hyper-connected era means to be constantly exposed to an outstanding volume of information, addressed to and customised for us through our personal devices. At the same time, the citizen himself is the source of a continuous stream of data and information that contributes to the design and efficiency of this digital habitat.

In this scenario the distinction between the online and offline experience is becoming less significant, especially for young people, and we can probably speak of an "onlife" perspective, as suggested by the European Commission Onlife Initiative (2013) and summarised in *The Onlife Manifesto*, outlining how "the deployment

of ICTs and their uptake by society radically affect the human condition ... through ... the blurring of the distinction between reality and virtuality ... and the reversal from information scarcity to information abundance" (Floridi 2015: 2-3).

Consequently, the relationship between democratic citizenship and digital citizenship needs to be retuned. In terms of training, digital competences are becoming core to being a competent citizen, and they need to be closely linked to the competences needed in a democratic culture, combining skills and knowledge with values and attitudes (Council of Europe 2016: Chapters 2 and 3).

Therefore, the most important measure against disinformation and fake news is the ability to exercise critical thinking, through fostering a combination of digital and democratic competences, especially access and inclusion, learning and creativity, and media and information literacy (Council of Europe 2018a).

The European Digital Competence Framework for Citizens (DigComp)⁹ lists 21 key components of digital competences, belonging to five areas and eight related proficiency levels (two levels for each of the four macro-levels – foundation, intermediate, advanced and highly specialised):

- ▶ information and data literacy;
- ▶ communication and collaboration;
- ▶ digital content creation;
- ▶ safety;
- ▶ problem solving.

Following the taxonomy devised by DigComp, the Digital Resistance project focuses on the digital skills relevant to the first and second areas. The skills included for information and data literacy are:

- ▶ browsing, searching and filtering data, information and digital content;
- ▶ evaluating data, information and digital content;
- ▶ managing data, information and digital content.

Such skills are essential to implement steps to check the truthfulness of news, especially when these steps are numerous and involve several dimensions. For example, the investigation of the reliability of an image requires knowing how to search for it online, access a browser and choose a search engine and other related tools that are available. Moreover, one should be able to evaluate the credibility of sources of data, information and digital content, and compare and organise them.

The skills included in the section "communication and collaboration" concern the interaction and sharing processes between individuals, and between individuals and digital technologies. They are:

- ▶ interacting through digital technologies;
- ▶ sharing through digital technologies;
- ▶ engaging citizenship through digital technologies;
- ▶ collaborating through digital technologies;
- ▶ netiquette;
- ▶ managing digital identities.

Obviously, the other three areas – content creation, safety and problem solving – are involved as competences in the process of tackling fake news, especially for individuals who want to orient themselves in the world of digital information, to understand the risks and threats in different digital environments, the impact of usage of digital technologies, and the factors that can affect web research results as well as the safety of devices and data.

Taking a closer look at the competences described above in relation to tackling fake news at an individual level, especially the skills for information and data literacy, it becomes clear that one must understand the differences between digital skills in terms of "information processing" and media and information literacy in terms of "critical thinking".

9. The project DigComp – The European Digital Competence Framework for Citizens – was developed by the Joint Research Centre, and its publications are a reference for the development and strategic planning of digital competence initiatives in Europe. The current version is labelled DigComp 2.1, "The digital competence framework for citizens" (Carretero, Vuorikari and Punie 2017).



Figure 2. Information and data literacy – Evaluating data, information and digital content

Source: Carretero, Vuorikari and Punie (2017)

Chart shortened by the authors.

As Baacke (1996) points out, media skills and media and information literacy need to be fostered together to manage the demanding and fast-changing context of the information society, to develop a critical and reflective approach towards all media, and to manage and mature new skills and knowledge autonomously.

Thus, being competent in the information society means to develop competences to an adequate level of proficiency regarding:

- ▶ media criticism: an ongoing personal reflection on media, in order to evaluate and categorise media outputs, but also to reflect on one's own behaviour in media contexts in a socially and ethically responsible way;
- ▶ media knowledge: familiarity with the analogue and the digital media system, and knowledge about how communication works in different media contexts;
- ▶ media use: the competence to make use of media in an active, conscious and responsible way;
- ▶ media creation: active participation in the communication and design process of media outputs.

A critical, analytical and reflective approach to media is very important for one's own personal and data security, but it is also fundamental to develop an in-depth understanding of democratic and social processes in the digital information society. Peissl (2018) calls this skill "critical media competence", necessary to manage the increasing risk of perceiving media reality only from one's own point of view (see Chapter 1) and, therefore, easily falling for fake news and disinformation.

Media and information literacy refers to all the technical, cognitive, social, civic and creative competences that allow us to access, have a critical understanding of and interact with media. These capacities allow us to exercise critical thinking, while participating in the economic, social and cultural aspects of society and playing an active role in democratic process. The lack of media competences restricts the individual within the participation process of political and cultural decision making.

Media and information literacy is therefore a tool that can empower citizens, raise their awareness and support a critical approach to online content to help counter the effects of disinformation campaigns and fake news in today's digital media landscape. It covers different media: TV, radio and press, and through traditional and online channels, addresses the needs of all ages.

Activity

What digital competences do your students believe they have? Make them take a test.

Go to the Europass website (<https://europass.cedefop.europa.eu/resources/digital-competences>) and ask your students to evaluate their actual competences and to read out the higher level descriptions.

- ▶ As far as the students are concerned, which competences are needed to be able to tackle fake news?
- ▶ What do they believe they still have to learn to become proficient users?
- ▶ How do they believe they will be able to acquire new competences?
- ▶ How can these competences be acquired during ordinary classroom activities?

If you prefer, you can also work with the Digital Competence Wheel: <https://digital-competence.eu>.

As described in Chapter 1, fake news needs to be tackled on different levels that involve different actors: media professionals, the political arena, the private sector and non-governmental organisations.

Another important level of intervention concerns individual users, who can resist disinformation by gaining a deeper understanding of the different factors that influence the perception and understanding of news and information.

Above all, users should reflect on their online behaviour: how much time do they spend on the internet, and on social media and messaging services? Smartphone users access their device on average 150 times a day, once every six minutes, spending approximately 3.3 hours on them every day (Kleinerperkins 2018).

For this reason, the attention paid to online content is limited in time and quality: the online user spends on average eight seconds on a single post, mostly without reflecting on the context or the information itself (Riva 2018: 149). The consequences of such a significant online presence particularly affect one's metacognitive skills: users are not able anymore to differentiate between the consumption of online content and the processing of the content itself. And since they do not have "enough time" to reflect, they prefer biased information that does not interfere with their beliefs (ibid.: 119). Syndromes like "cognitive overload" and "FOMO" (fear of missing

out) foster this lack within the metacognitive skills. People with lower levels of metacognitive and cognitive skills reflect less and are less likely to correct their own beliefs when confronted by fake news.

Further reading (in Italian)

"A school in Pavia conducts an experiment: 'five days without a smartphone? I even read a book'", www.corriere.it/cronache/19_febbraio_15/test-tra-liceali-senza-social-5-giorni-ho-persino-letto-libro-ee6c2620-3160-11e9-a4dd-63e8165b4075.shtml.

Activity

Check your online time!

Facebook and Instagram have a tool to check how much time a user has spent in a day or a week on social media.

- ▶ Make your students check their personal "online time score" and collect the data.
- ▶ Make your students "write a diary" offline (e.g. in a notebook): ask them to take notes on how much time they have spent on the internet in a week, as well as a list of the different activities.
- ▶ Propose the use of "time-controlling apps" like Moment for Apple, StayFree or Screen Time for Android phones. Another tool to control the time users spend on the internet is Forest. Make your students use these apps in special contexts, e.g. during homework sessions, and make them discuss the effectiveness of these tools.

With regard to young people, it is important to understand that there is a difference between online familiarity and online awareness. Knowing how to use a smartphone does not automatically imply an understanding of how to cope with the online world. For this reason, it is very important that young people get the chance to learn about the internet, its mechanisms and effects on their own personal existence. More attention and adequate training is needed.

Guidelines and tools

As part of a multilevel and multidisciplinary strategy of training and intervention, institutions, web industries, communication professionals and educational agencies have published tips and guidelines to help identify fake news and promote correct and competent behaviour in creating and spreading news of any kind.¹⁰

The following guidelines, which can be used in different pedagogical approaches, try to provide an overview on how to (a) recognise fake news; (b) understand fake news; and (c) manage fake news. The competences promoted in this chapter are closely related to the European Framework on Digital Skills (DigComp).

It is important to remember that digital competences must not be seen as single skills, but need to be woven together. For example, communication and collaboration competence areas require the knowledge to select the appropriate tools and technologies to interact, verify and share content and information along with the sensibilities to apply a correct behavioural code and to manage and protect digital identities responsibly. These diverse levels of intervention, though stemming from different perspectives and needs, aim at the same target as they contribute to strengthening the culture of democracy and relate to citizenship as a whole.

Moreover, to empower active and competent citizens, training to resist fake news should also foster the development and sharing of digital content. This entails a more advanced level of proficiency in the field of technical skills as well as in the area of cultural and language comprehension (see Chapter 4 for more detail).

10. In 2017, the Italian Chamber of Deputies and the Ministry of Education launched the initiative "Basta Bufale", a project aimed at developing students' skills in media and information literacy and providing teachers with didactic material to support students in learning how to recognise false news, identify sources and investigate truthfulness. Alongside a decalogue on how to recognise fake news, the project has produced several materials including a booklet for teachers – "How to become an *antibufala* detective" – written by the well-known Italian debunker and digital activist Paolo Attivissimo (2017).

How to recognise fake news

Individual users trying to tackle fake news can consult and use fact-checking/debunking websites or services provided by non-governmental organisations and companies.¹¹ As far as the five project partners are concerned, in the summer of 2019, there were five active fact-checkers operating in Germany, three in Italy, and one each in Greece, Austria and Romania.¹² Another interesting tool is the NewsCracker extension for Google Chrome,¹³ an app that rates the correctness of news based on an artificial intelligence system.

This table lists international web-based services that can check on the reliability of elements that could be part of fake news.

Tools to check the reliability of websites

Backlink check

- ▶ to find out who links to a specific web page, see <https://ahrefs.com/de/backlink-checker> or www.backlink-tool.org/en/backlink-checker

Web archives

- ▶ to check on a website's history see <https://archive.org/web>

Tools to check the reliability of user profiles

Bot check

- ▶ to find out if there is a real person behind a profile or a so-called social bot, see <https://botometer.iuni.iu.edu> or www.cs.unm.edu/~chavoshi/debot

Tools and websites for fact-checking

Websites that publish fact-checks

- ▶ to check if a report has already been published, find fact-checking services through this website <https://reporterslab.org/fact-checking>

Fact-checking tools

- ▶ to debunk fake news through plug-ins/browser extensions, see www.invid-project.eu or www.news-crackercompany.com

Tools and websites to check the reliability of images and videos

Reverse image search

- ▶ to see if a photo has been used before and if so, in what context, see www.tineye.com or ctrlq.org/google/images

Image background check

- ▶ to see if the data of the photo fits with the story that is being told see www.exifdata.com

Video background check

- ▶ to see if the data of a video fits with the story that is being told, see <https://citizenevidence.amnestyusa.org> or www.watchframebyframe.com

Geotagging check of YouTube videos

- ▶ to find out if an event is really happening, see <https://mattw.io/youtube-geofind/location>

If you have doubts and it is impossible to find definitive debunking of a given news item on such sites, you will have to move forward with a detailed analysis of your own. Fake news often camouflages itself, so it is

11. Snopes (www.snopes.com) or Storyful (<https://storyful.com>), a News Corporation-owned company that verifies social posts for news outlets.

12. See a map of all fact-checkers here: <https://reporterslab.org/fact-checking>.

13. Google Chrome, Firefox and other browser services offer an add-on tool called WOT (Web of Trust), which provides crowdsourced reviews on the trustworthiness of websites. Due to important issues regarding the use of data and privacy breaches, the service still needs to be improved (Firefox and Chrome only recently added the tool to their online service pack).

not recognised as such. For this reason, investigation of fake news can demand a sophisticated combination of skills and competences to analyse:

- ▶ the reliability of textual and visual elements (headlines, layouts, URLs);
- ▶ the coherence and traceability of the context surrounding the news item (links and sources, dates, geolocalisation);
- ▶ the authenticity and relevance of media content (photos, videos, data and charts).

Each of these areas of investigation presumes different digital and cultural competences, at different levels of proficiency.

The following list of areas of investigation sums up the main tips provided by educational institutions, fact-checkers and debunkers as well as social media sites. Single areas of investigation are connected to the skills and competences that teachers need to develop and foster in their students.

A list of classroom activities to enhance a good investigation process is provided. The activities are divided into different levels according to DigComp; teachers should evaluate the appropriate level of activities according to the age, knowledge and competences of their students and their own preparation. Not every activity can be carried out at all levels, but every activity can be combined with one or more activities in the same or another section.

All activities can be implemented using the enquiry-based learning method, or different stages of the method by scaffolding the level of difficulty and autonomy in the activity from the students' point of view. You will find further information on enquiry-based learning in Chapter 3.

What kind of information can we retrieve from the URL, credits and author of the news item?

Digital skills and competences:	
<ul style="list-style-type: none"> ▶ Information and data literacy: <ul style="list-style-type: none"> - browsing, searching and filtering data, information and digital content; - evaluating data, information and digital content. 	
Elements to check	Questions to ask
Who is the owner/editor/institution running the web page/social media profile?	<ul style="list-style-type: none"> ▶ Is the source trustworthy? ▶ Is it a private, institutional or governmental web page? ▶ Is it an official account? ▶ Is there a credit? ▶ Is there an "about" section that details, for example, the structure of the organisation?
What does the URL/profile look like?	<ul style="list-style-type: none"> ▶ Take a look at the URL extension (e.g. .com/.it). Do you recognise the country or institutional extension? ▶ Check the URL in detail. Compare it to established sources. ▶ What does the profile look like? Is there a profile image? Does it correspond to the interests of the author(s)?
Who is the author of the text or the post on social media?	<ul style="list-style-type: none"> ▶ Can you find the name of the author in other resources on the internet? ▶ How does the author describe him/herself? ▶ Has the author published other articles/posts on the same or other topics?
Who are the witnesses or experts cited in the news?	<ul style="list-style-type: none"> ▶ Are there names of witnesses and experts and can these names be found in other sources? ▶ Are the experts well known and do they have a good reputation elsewhere?

Activity (Foundation)

Make a selection of different news sites (that are reliable) and ask your students to decide which parts of the information provided by the URLs, credits and authors/editors make this information reliable.

Let the students retrieve information from the URLs, credits and authors/editors.

Make a list of reliable online news sources in your country.

Activity (Intermediate)

Make a selection of two or three different news items that talk about a single event that should be known to your students. Make sure that the news items differ from each other in terms of reliability.

Let students perform an analysis, comparison and evaluation of the news items by checking the URLs, credits and authors/editors of the news items.

Ask students to find more news on the same event online and categorise them according to their level of reliability.

Activity (Advanced)

Select fake news items and make students document the information they can retrieve from the URLs, credits and authors/editors.

What kind of information can the students find? Discuss the results and the influence of the lack of information on credits/authors on the reader.

What kind of information can we retrieve from the formatting, dates, links and location of the news item?

Digital skills and competences:

- ▶ Information and data literacy:
 - browsing, searching and filtering data, information and digital content;
 - evaluating data, information and digital content.

Elements to check	Questions to ask
Check the layout of the page/news item	<ul style="list-style-type: none">▶ How is the layout of the page organised?▶ What about the overall layout?▶ What about fonts, graphic elements and multimedia content?
Check the dates	<ul style="list-style-type: none">▶ When did the event occur? Do the dates and events match?▶ Are events reported in chronological order? Does the timeline match up?▶ Are the dates specific or not (e.g. "last month")?
Check the links	<ul style="list-style-type: none">▶ Do the links in the story refer to other original reporting sources?
Check the location	<ul style="list-style-type: none">▶ Are the posts geotagged (e.g. on Facebook, Twitter or Instagram)?▶ When I enter the geotagged locations on Google Maps, do they relate to the event reported in the news?
Same news on other sites	<ul style="list-style-type: none">▶ Has the event been reported on other sites? Are these sites reliable?

Ask an expert	<ul style="list-style-type: none"> ▶ I have done some research, but I am still not satisfied with the result. Can I ask an expert? ▶ Check on Wikipedia (mother tongue and English version); look up academic works on the topic on Google Scholar or Google Books. ▶ Check with teachers, parents and topic experts such as university lecturers or journalists.
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Activity (Foundation)

Provide your students with different news items on the same topic and ask them to compare the layout of the presentation: which graphic elements make them believe that a piece of information is reliable, or the contrary? Discuss in class.

Activity (Intermediate)

Provide students with a topic that has recently been discussed in the news in your country or internationally. Assignment 1: ask students to make a timeline infographic of the actual events and compare it with that of a related news item (e.g. across a week or a month). You can find free timeline infographic templates at: <https://venngage.com/templates/search/timeline>.

Assignment 2: divide students into groups and ask them to list local and geographic information relevant to the news event. Check the places on Google Maps and draw a map of the events, inserting dates and places. Use www.scribblemaps.com to create your own map.

Compare the maps in class.

Activity (Advanced)

Divide students into groups and ask them to pick a news event without letting the other groups know about their choice.

Ask students to rewrite a news article based on the event, incorporating 5-10 items of “false information” to do with dates and locations, together with misleading external links. The false information needs to be “credible” (e.g. the first landing on the moon did not occur in 1869).

Ask the groups to share the articles and detect the false information. The winner is the group that does this best.

What kind of information can we retrieve from the headline, key phrases and language use of the news item?

Digital skills and competences:	
<ul style="list-style-type: none"> ▶ Information and data literacy: <ul style="list-style-type: none"> - browsing, searching and filtering data, information and digital content; - evaluating data, information and digital content. 	
Elements to check	Questions to ask
Typography of the headline	<ul style="list-style-type: none"> ▶ Is the headline written in capital letters? ▶ Are there many exclamation marks?
Word use and content of the headline	<ul style="list-style-type: none"> ▶ What kind of language does the headline use? ▶ What kind of information does the headline provide?

Check the use of language	<ul style="list-style-type: none"> ▶ Are the spelling and grammar correct? ▶ Does the language fit the kind of publication it claims to be? ▶ Is the news item a journalistic critique or does it reflect a personal opinion? ▶ Is the news item a letter from a user or a reader?
The use of keywords (names of people, places, companies or products involved)	<ul style="list-style-type: none"> ▶ Is the news item related to real events? ▶ Do the keywords bring up the event when put into a news search engine (e.g. news.google.com)?
The use of key phrases	<ul style="list-style-type: none"> ▶ Does the information sound too outrageous? ▶ Can I find the same key phrases in other news items by credible sources?
Check the original language	<ul style="list-style-type: none"> ▶ What was the original language of the news item? Check if you can find the original article and check the content (using your language skills or Google Translate). ▶ Can I find the same news item in other languages (e.g. in English or other languages you speak)? Does the news report on the same issue? ▶ If I add "fake" or "hoax" to the keyword I am looking for, do I find debunking or fact-checking information?

Activity (Foundation)

Provide students with fake and serious news items on the same topic without telling them which are fake. Ask them to read and analyse the language of the different news versions and to label the news "fake" and "serious". Ask them to explain their answers.

Activity (Intermediate)

Provide groups of students with a few links to fake news articles. Ask them to transform the serious news titles into fake news titles. What kind of difficulties come up? Discuss in class.

Activity (Advanced)

Ask students to choose a news event and conduct research on the online coverage of this event on news sites and on social media, in their own and foreign languages. First, ask students to analyse the language being used in the news coverage from a journalistic point of view. Then, analyse coverage of the same event on Facebook, Twitter and Instagram. How does the style of language change and how does perception of the news event change from the user's point of view?

Compile a list of keywords.

Activity (Expert)

Divide the students into groups and ask each group to consult different fact-checking web services and analyse the language of at least 15-20 different fake news items, if possible, on different topics. Include text, image and video examples.

Ask the students to create a list of language patterns, phrases and vocabulary that they believe are typical for fake news.

Compare the results in class and compile a common list.

What kind of information can we retrieve from the photos, videos and other visual cues (including statistics and data) in news items?

Digital skills and competences: <ul style="list-style-type: none"> ▶ Information and data literacy: <ul style="list-style-type: none"> - browsing, searching and filtering data, information and digital content; - evaluating data, information and digital content. 	
Elements to check	Questions to ask
Videos, images and other multimedia content	<ul style="list-style-type: none"> ▶ Is the visual element reliable? ▶ Does the visual element manifest signs of manipulation (filters, retouching, etc.)? ▶ Where are the credits for the visual element? ▶ Could the visual element be a deep fake? ▶ Is the date and time of video uploading aligned with the event? ▶ When I check geotagged videos, are they aligned with the event, the time frame and the licence?
The use of data and charts	<ul style="list-style-type: none"> ▶ Are the numbers and statistics used plausible and relevant? ▶ Could the numbers have been manipulated? Can I find similar numbers on the same topic elsewhere?

Activity (Foundation)

Image manipulation has existed since photography was invented. Show famous manipulated pictures to your students (e.g. www.pocket-lint.com/apps/news/adobe/140252-30-famous-photoshopped-and-doctored-images-from-across-the-ages) and discuss the impact on the viewer.

Ask students to present famous manipulated images or videos in class and ask them to explain to their peers the kind of manipulation involved.

Activity (Intermediate)

Assignment 1

Ask students to undertake the verification challenge to test their ability to find information on upload times and locations of videos and images at: http://ftp.firstdraftnews.com/articulate/v_c18/story_html5.html.

Discuss the results in class and ask the “experts” to explain to less informed students how this investigation process works.

Assignment 2:

Provide students with news items including images that have been manipulated. Ask students to use the software TinEye to carry out an image investigation. Ask them to compare an image used in fake news with the original image. Discuss the outcomes in class.

Activity (Advanced)

Ask students to detect a fake news item including an image and ask them to test themselves by finding more photos, videos or descriptions of the same event or the same place (using for example Google Reverse Image Search, Google News, Twitter’s advanced search or Facebook) and comparing the pictures they can find with that in the fake news item.

Is there a difference between images found on social media and images in online news contexts? Discuss the results in class.

Activity (Expert)

Ask students to create a list of the typical aspects to consider to detect manipulated images or situations where original images have been used in a false context to create disinformation. (See: <https://libguides.ashland.edu/fakenews/photos> or www.abc.net.au/news/science/2018-02-11/fake-news-hoax-images-digitally-altered-photos-photoshop/9405776).

Ask students to illustrate the list with examples from actual cases.

A useful tool to use with students to analyse images from different media sources is the “autobiography of intercultural encounters” created by the Council of Europe: www.coe.int/autobiography.

How to understand fake news

Fake news is only successful if the context in which it is published and the community towards which the fake news is directed satisfy the following criteria (Riva 2018: 99):

- ▶ the fake news confirms the interests, prejudices and beliefs of the members of the community;
- ▶ the fake news needs to be seen and “clicked” on by a large proportion of the community;
- ▶ community members do not realise that the news is fake news;
- ▶ other news items circulating within the community do not provide a contrast with the fake news and do not reveal anything about it being fake;
- ▶ only a few members of the community look for information outside of the usual community communication channels.

This ideal “environment” for fake news is easily detectable in social media contexts and they can be defined as “echo chambers” and “filter bubbles”, as described in Chapter 1.¹⁴ Thanks to these digital community contexts, fake news can propagate digital mass persuasion strategies: “Never before in history has fake news been able to influence individuals and groups in such a short time and to such great extent as today. Not only are they capable of modifying the perception of reality by an individual – ‘fake news’ are the reality – but the individual immediately feels the need to share the fake news in real time” (ibid.: 161). According to Attivissimo (2017) and Riva (2018), it is important to recognise the different communication types and styles of fake news. Successful fake news usually shares the same characteristics and uses a similar persuasive strategy:

- ▶ relies on emotions such as fears or prejudices (e.g. curiosity, love of animals, greed, morbidity, anguish, insecurity, racism, paranoia) and wants the user to make a choice (i.e. share the news);
- ▶ addresses issues of great common interest (e.g. terrorism, health, racism and other forms of discrimination, politics, celebrities) and is tailored to the needs of a certain community with similar psychological and social characteristics;
- ▶ uses dramatic or sensational tones (exclamation marks in titles, explicit invitations to share, claims such as “the newspapers will not tell you this”);
- ▶ describes incredible or extraordinary events (e.g. catastrophes, gigantic conspiracies, extra-terrestrials, colliding asteroids, shocking or scandalous declarations/behaviour on the part of celebrities or politicians);
- ▶ titles that are designed to collect “clicks” (clickbait) and are often not related to the news content itself;
- ▶ uses graphics and layout similar to that of mainstream social media and journalistic websites, making it hard to distinguish between original and fake news; uses digital and multimedia outlets to facilitate its spread across different media channels (see Chapter 1).

Fake news content can be debunked by understanding the persuasive strategies used to influence the user. Since it is very difficult to distinguish between the several different aspects of fake news content, we propose to rely on the description of how disinformation can be constructed following Wardle (2017) and the badge breakdown of disinformation categories proposed by the online game “aboutbadnews.com”, created by Cambridge University and DROG, a Netherlands-based platform against disinformation.

¹⁴ Google Trends can help to understand which search topics have been popular in different countries across time. See <https://trends.google.com/trends/?geo=US>, accessed 1 November 2019.

What kinds of persuasive strategies can we find in fake news?

Elements to check	Questions to ask	Critical thinking
Is it really fake news?		
	Is this information fake or is it a mistake, bias or another form of incorrect news reporting?	Not everything that is false is fake. What distinguishes false from fake news?
Satire		
	Is the news supposed to be a joke or a satire?	Inform yourself about the difference between satire, irony and jokes.
	Is the news published on a site/profile that wants to make satire/jokes?	Look up websites and profiles that publish satire. What do you notice?
		Why can it be so difficult to distinguish satire from real facts?
		What do I need to know in order to be able to distinguish satire from other journalistic formats?
		Fake news does not distinguish between opinions and facts. What is the purpose of this?
		Satire should not do any harm but can still be misleading. How does this happen?
Impersonation		
	Have genuine sources been impersonated?	Do you know the person/organisation/company who is "speaking", either as the author of the news item or as a source being cited?
		Are you sure that the profile of the person is their official profile? How can you find out? Check the username or the web page address.
		Do not fall for a professional look or convincing name: they do not necessarily imply legitimacy.
Discredit		
	Does the news item use misleading information to frame an issue, group or a person?	Do you know that discrediting one's opponents is a common strategy of fake news? When people are accused of using disinformation, they tend to distract attention from the accusations by attacking the person who is making them. Often, they deny that the problem exists. Why do they prefer to attack rather than defend themselves? What would you do if you were accused of using false news to discredit someone? Apologise, take revenge or simply do nothing?

	Does the content harm the reputation and trust of an individual or a group of people?	<p>Reflect on how people's reputations can be damaged by falling victim to fake news.</p> <p>What difference is there between famous people and ordinary people?</p>
		<p>Discrediting people is a part of cyberbullying and is often associated with fake news about a person.</p> <p>Have you ever encountered fake news on a personal level, targeting yourself or somebody you know?</p> <p>Do you know about cases of famous people being discredited? What role does fake news play in this context?</p>
Emotion		
	What emotions does the content appeal to? Rage, fear, empathy?	<p>Emotional content aims at people's basic feelings. Does that mean that the content of the news item is necessarily "fake"? What is the difference between fake news targeting emotions and an "emotional" news article?</p>
		Do you know examples of fake news "playing" with emotions? What emotions are involved most when it comes to fake news?
		Memes play an important role with regard to emotions in fake news. Why?
		<p>Marketing strategies use emotions as well as fake news in order to "catch" the attention of the user or the reader.</p> <p>Check the most important emotions for marketing here – www.smartinsights.com/content-management/content-marketing-creative-and-formats/emotional-content-to-earn-attention – and reflect on the similarities and differences to fake news.</p>
Polarisation		
	Do headlines, visuals and captions mislead, compared to the original content? Has genuine content been shared with false contextual information?	<p>Why does the mixture of genuine and false content lead to polarisation?</p> <p>How can false contextual information create conflict?</p>
	Does the content boost one's opinion about something or is someone trying to raise the level of conflict?	<p>Disinformation aiming at polarisation seeks to widen the gap between different opinions on a topic or argument.</p> <p>What is the purpose of raising the level of conflict between different parties?</p>

		Why do new websites or profiles on social media use polarisation or “false amplification” (blowing up something to be something bigger than it is) to gain followers?
		Why is political communication particularly implicated in polarisation strategies? Discuss the connection between fake news and political polarisation.
Trolling		
	Does the content want to create disturbance in the communication between individuals or communities?	“Trolling” means deliberately evoking an emotional response by using false or manipulated information or confrontational comments. Do you know cases of trolling? Can you explain how they work?
		Trolling is closely related to emotions. How?
		Somebody responds to your post in a very confrontational way. You have been trolled. How do you react?
		Why, as far as you know, do trolls behave like this? What is their purpose?
		Have you ever heard about “troll factories”? Do some research.
Conspiracy		
	Does the content maintain that complex phenomena or events have been orchestrated by others, mainly companies or institutions, in order to deceive the “common people”?	Check the list of the most important conspiracy theories on Snopes: do you recognise a few? Which of them do you believe to be true? Why?
		What are the topics treated in your country as “conspiracy theories”? Why do you think these topics are so important to your country?
		How are conspiracy theories communicated? What are the most important communication channels? What role does social media play?

Further reading

The Council of Europe report by Wardle and Derakhshan (2017), “Information disorder: toward an interdisciplinary framework for research and policymaking” includes a list of national fact-checking websites from 20 European countries. See: www.coe.int/en/web/freedom-expression/information-disorder.

Transversal activities

Let your students play the online game “get bad news”, where they step into the role of fake news creators and can experience the mechanisms at work in the spread of disinformation. See: www.getbadnews.com.

Ask students to create fake news items by themselves and present them in class. The other students should debunk the work of their classmates using the guidelines and strategies presented above. You can use the following applications (many more are available online):

- ▶ www.thefakenewsgenerator.com
- ▶ <https://breakyourownnews.com>

How to manage fake news

While single fake news items have been analysed in the preceding sections in terms of their recognisable characteristics and strategies, it is important to know that managing fake news once it has been detected is the hardest part of fighting disinformation online.

To develop these necessary, high-level competences, students need to be aware of subtle mechanisms that are difficult to detect by analysing the fake news item itself. Users themselves may be caught in a trap of persuasive phenomena that make it very hard to “step outside” and observe one’s behaviour in an objective way.

One of these subtle persuasive effects is the so-called “sleeper effect” (Müller and Denner 2017: 14). Users tend to forget the source of information they have accessed and whether they trust this source or not. But they are likely to recall the information, especially if this information confirms already existing opinions on something (bias). The “sleeper effect” is particularly relevant to social media posts.

Another persuasive phenomenon is the “truth effect” (ibid.: 15): While the sleeper effect concerns the source of information, the “truth effect” can also influence careful users who are constantly confronted with false or fake information that comes from different sources. Although users, in the beginning, believe the information to be wrong, with the passing of time and with continuous exposure to the same news, they start to believe in the truthfulness of the information. Fake news can become “more true” from the moment we “already know” about the news. This effect is especially true regarding individuals with a conservative/right political orientation (Arendt, Haim and Beck 2019: 183).

A positive effect of the truth effect is the possibility that a user who is constantly exposed to the same information starts to doubt it and develops resistance towards the persuasive strategies of fake news; in this case contact frequency with a single user exceeds a certain level and becomes less effective.

But the opposite can also happen: the “backfire effect” (ibid.: 184) elicits a kind of “self-defence” in those who believe the false information in the moment that someone points out its falsity or cautions against it (see Chapter 1). This happens especially in cases where the verification does not match one’s beliefs or ideology.

Activity

Effects with great effect!

Discuss the different persuasive effects of fake news with your students and ask them to “visualise” the mechanisms of single effects

- ▶ Visualise the effect with the help of a mind map or a flow chart.
- ▶ Design a timeline for a fake news item on the internet: compare the chronology, the number of likes, and the number of shares, and compare the three elements.
- ▶ Do a role play as the creator of a fake news item, a user and a “persuasive effect”.
- ▶ Discuss the different arguments each role player is using.
- ▶ Reflect on your own behaviour: which news sources do you never check? Is it because you believe them automatically? Discuss in class.

Since it is very difficult to detect these subtle persuasive phenomena, it is very important that students reflect on their online behaviour to be aware of such effects that support the spread of fake news.

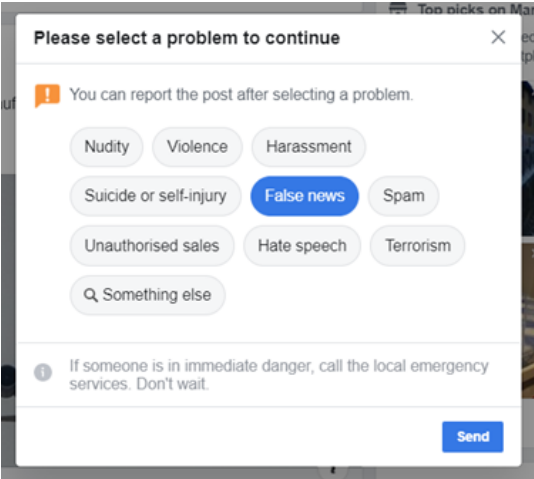
Fake news spotted – And now?

The following list provides tips on how to manage disinformation after encountering, analysing and identifying a news item as fake.

Report!

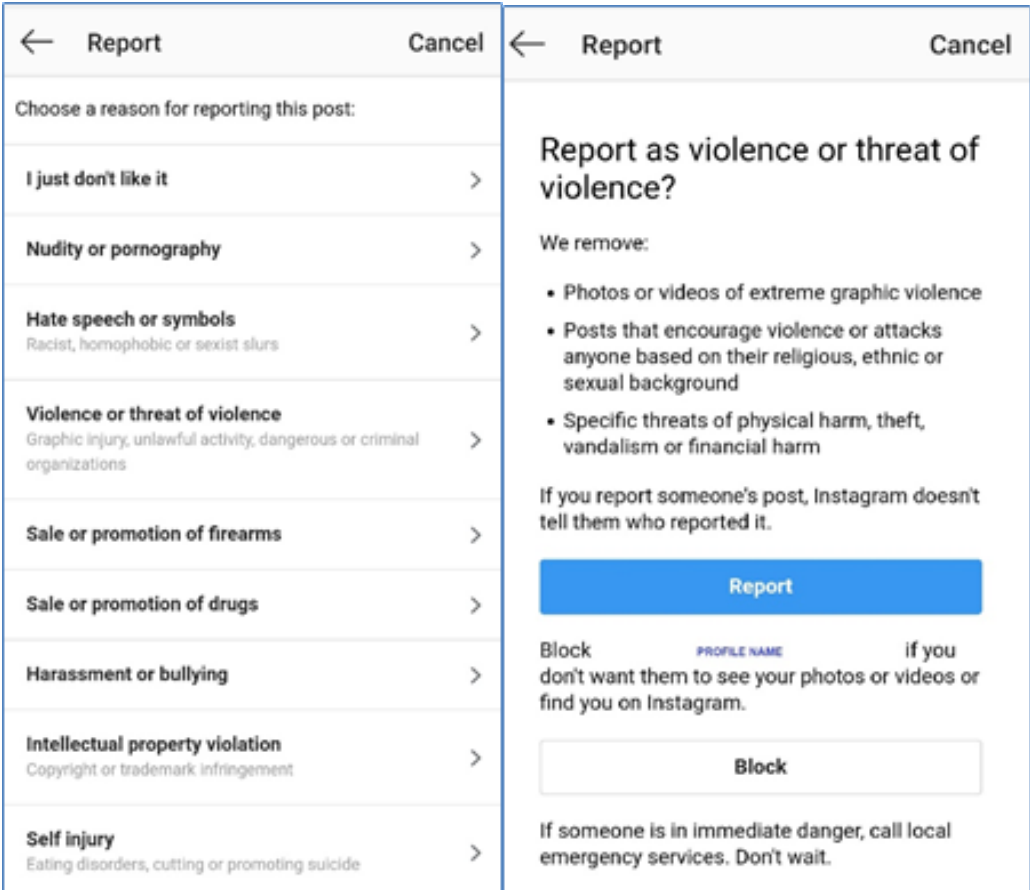
Users can report inappropriate content directly to the social network administration concerned. Big social network platforms like Facebook (which owns Instagram and WhatsApp) and Google have different options for individual users to report fake news.

Facebook offers a service related to a single post, in which “false news” can be reported by the individual user.



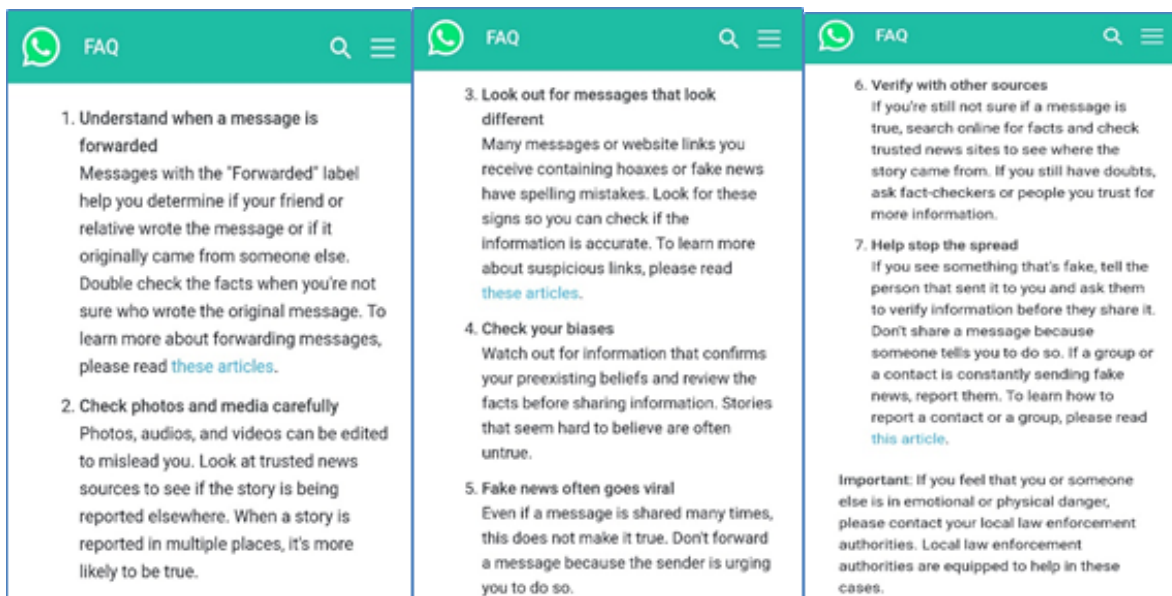
Facebook screenshot (18 July 2019)

Instagram, on the other hand, does not have a dedicated tool to report fake news, but offers its users a list of inappropriate actions that can be reported under the “Report” section.



Instagram screenshot (18 July 2019)

The messaging service WhatsApp offers a list of tips on how to deal with disinformation online. “Tips to help prevent the spread of rumours and fake news” can be found under Settings/Help/FAQ/Security and Privacy.



WhatsApp screenshots (18 July 2019)

Activity

Ask your students to find the WhatsApp tips on tackling fake news and discuss in groups:

- ▶ Choose an actual fake news item on social media and ask the students to apply the tips to the news. Do they work? Which tip do they need further information on?
- ▶ Ask students to “check” their WhatsApp history. Have they ever encountered fake news while chatting with their friends? Ask them to show and explain some examples.

Don't share!

Sharing fake news means reinforcing and multiplying the power of a fake news item. Sharing a fake news item means being an ambassador for the (wrong) interests of somebody else (e.g. for economic, social or political reasons) and once a fake news item has been set loose, it's very hard to stop its circulation and publish denials of what has been communicated. Furthermore, sharing fake news fosters the truth effect (Müller and Denner 2017: 15).

It's easy to avoid playing a role in spreading fake news. Just do nothing – don't “like” or share the news item. After all, the risks of sharing fake news are numerous: people can be defamed, violence can be instigated, hatred may be encouraged, and people can get hurt, physically and psychologically (Attivissimo 2017).

Communicate respectfully!

Participating in the process of sharing, publishing and commenting online, “cutting the power” from fake news, can also be done through “correct” communication. The Italian project Parole O_Stili¹⁵ offers a decalogue of behavioural advice regarding the responsible use of words and communication, especially in a democratic and political context, in order to avoid the spread of hatred, violence and aggression. These are the key points (shortened and adapted) of the decalogue:¹⁶

1. Virtual is real

I know that communication is an integral part of my actions, geared to the common good. So, I always take responsibility for what I communicate, both online and offline. I do not consider or use the network as a free zone where everything is allowed.

15. <https://paroleostili.it/cambiostile/?lang=en>, accessed 2 November 2019.

16. Didactic material for teachers is available on this topic: <http://paroleostili.com/materiale-didattico>, accessed 2 November 2019.

2. You are what you communicate

My communication defines me. I always make sure that what I communicate and what is communicated on my behalf is responsible.

3. Words shape thought

I define my ideas and intentions as best I can. I do not take advantage of the media and their powerful channels to spread attractive but offensive or unfounded messages.

4. Before you speak, you need to listen

I take into account the arguments of my interlocutors even if I do not share them. I am not interrupting them. I do not deform their words to counteract better. I prefer dialogue and close comparison of ideas to monologue.

5. Words are a bridge

I believe in the power of my ideas and the power of my words. To my interlocutor, I offer my arguments and my passion to open up a dialogue and to convince, never to annihilate.

6. Words have consequences

I believe that a public debate, even if it is bitter, should be a time of growth for all. Before I make a statement, I think about the consequences.

7. Sharing is a responsibility

What I share online reflects on my personal credibility. I do not produce, spread or promote news, information and data that I know to be false, manipulated or misleading.

8. Ideas can be discussed, but people deserve respect

I fight for my ideas and contradict the ones that I think are wrong, but I do it always on the level of the content. I respect my interlocutor and his personal sphere, I do not mock him, I do not attribute to him statements that he has never made.

9. Insults are not arguments

I am aware that insults are humiliating both for those who receive them and for those who make them: for this reason, I do not insult and do not answer insults.

10. Silence also communicates

When I speak, I make relevant communications that have a weight and meaning. When I am silent, this too has a weight and a meaning.

Activity

Ask your students to find examples of communication on social media that either respect or do not respect the decalogue above.

Compile the examples and reflect.

- ▶ Who are the authors of the communication?
- ▶ What effect do they want to achieve with their communication?
- ▶ What is the topic of the discussion?
- ▶ What is the context of the discussion?
- ▶ How has communication changed through social media? What types of communication do we have on social media? Is it only through text?
- ▶ What are the advantages and disadvantages of social media communication?
- ▶ How is fake news related to communication?
- ▶ Discuss the importance of online communication for society and one's personal sphere in class.

Warn others about it!

As pointed out in Chapter 1, social media administrators or fact-checkers warn us about fake news. Unfortunately, the effects of these warning actions are not clear, and more research needs to be done in order to understand what actions are the most effective.

For example, the “sleeper effect” cannot really be overcome by warnings since these actions usually refer to the lack of trustworthiness of the sources, and as we have seen, it is not the sources that stay in the mind but the information itself (Müller 2017: 16).

Warning messages can also lead to resistance (see “backfire effect”) and a reaction of anger and rage, since users may believe that the correction of the news item itself is an undue attempt to influence their opinion and limit their freedom of decision making (ibid.: 17). This effect is even stronger in social media contexts and in individuals with a conservative/right-wing political orientation, since warning messages do not seem to have an effect on these users. A warning message seems to be more effective in the moment a user wants to share a fake news item, but to confirm this presumption more research needs to be done (Arendt, Haim and Beck 2019).

Another option, which has been described in Chapter 1, is deleting fake news as soon as it appears online. This is very difficult to justify since it touches on aspects regarding the freedom of opinion and democratic values. Furthermore, users who do not find confirmation of their own beliefs on traditional social media platforms will easily find alternatives that are even less controlled and regulated. Finally, if traditional and “serious” media proceed by deleting news items with ideological content, populists would only be confirmed in their belief in a conspiracy of the intellectual elite (Müller 2017: 19).

Nevertheless, it is important to point out the existence of fake news within one’s own community, offering an evidence-based dialogue on what needs to be corrected without being patronising towards those holding contrary opinions (see “backfire effect”) (ibid. 21).

Activity

Become a fact-checker!

- ▶ Create a digital diary to be shared with your students (e.g. a Word document in Google Drive) or use journaling apps and ask them to report daily on their online reading behaviour and the (fake) news they encounter every day.
- ▶ Ask students to note the news (with links) in the shared documents and comment on them.
- ▶ At the end of the week (or some other defined period), share the outputs in class and discuss the spread of these news items.
- ▶ Decide with the students which of the collected news items have an impact in terms of disinformation and discuss warning strategies to be used to fight this.

One suggestion to deal with fake news is by applying the “truth sandwich theory”, as explained by George Lakoff, a cognitive scientist and linguist who has long studied how propaganda works. The first step is getting an overall big-picture view of the truth of a news event. Then, report what was being said without highlighting it, and close your warning with your fact-checked arguments: “Avoid retelling the lies. Avoid putting them in headlines, leads or tweets. Because it is that very amplification that gives them power. That’s how propaganda works on the brain: through repetition, even when part of that repetition is fact-checking.”¹⁷



George Lakoff @georgelakoff on Twitter, 1 December 2018 (screenshot)

17. <https://wapo.st/3jgcc0xM>

Activity

Truth sandwich

- ▶ Based on the activity explained above, divide the students into groups and make them create a retraction of a fake news item using the truth sandwich methodology.

Compare students' work in class and discuss which retraction would work best.

Fact-checking: a real case of fake news

Here, we present a famous fake news item and apply the tips we've explained above.

The image below was posted on Facebook by an anonymous user on 3 July 2018. The caption, translated from the Italian, says:

"Libyan port. THEY WILL NEVER SHOW YOU THESE IMAGES. THEY ARE ALL SET TO LAND IN ITALY!"

At the time, Italian public opinion was shaped by an intense debate about migration policies and the welcoming of boats of migrants from the North African coast. A new government was pushing strongly for far more stringent policies towards migrants that included refusing to accept boats rescued by non-governmental organisations in international waters and sending them back to the ports they had started out from. Just a few days before this post was published, a shipwreck had caused about 100 deaths on the Libyan coast and on social networks many users had questioned the authenticity of the photos of the recovered bodies. In this context, the post about the "Libyan port" was shared 9 000 times, with an even greater number of views. The post received innumerable comments, mostly indignant and aggressive towards the media in general and anyone who wanted to limit the spread of the news item. The post was taken down later.



We can now try to apply our methods to the message and the photo.

Firstly, examining the headline and text captioning the image, we can highlight the following elements:

- ▶ the text is written entirely in capital letters;
- ▶ the name of the alleged Libyan port is missing, so the geographical information is incomplete and vague;
- ▶ no source is stated: the post doesn't contain any link or reference to verify the origin of the news item. Although Facebook usually allows this, the photo is neither geolocated nor time-stamped;
- ▶ emotional impact: the news item concerns an issue (the phenomenon of immigration from Africa) that is very divisive and works on the fears and prejudices of citizens, and it announces an imminent and dramatic event;
- ▶ conspiracy: using a dramatic tone and alleging that this information had been hidden by the "traditional media" on purpose, the post implies that there is a conspiracy afoot.

These elements should already be sufficient for an evaluation of this post as unreliable, because the information that it contains is unverifiable. But let's also take a closer look at the image itself.



The place we can see in the picture is very crowded and, despite the fact that the image quality is not good, people seem to be dressed according to the season and the climate. We can also see that there is a big platform in the middle of the photo, the function of which isn't clear at all. There are no signs of docks, mooring or other buildings that would help to identify this place definitively as a port. There are different kinds of boats in the picture, most of them quite small, but none of them look like the rubber dinghies typically used by smugglers for trafficking. Furthermore, some of the boats are clearly recognisable as gondolas (particularly the blue boat in the bottom left corner), the traditional boats of Venice. Finally, downloading the image and putting it through a reverse image search provides us with unequivocal results. TinEye confirms that the oldest upload of this image dates to September 2010. A further search

through Google image search, limiting results to content uploaded before 4 July 2018, demonstrates that the photo depicts the live performance of the band Pink Floyd in Venice on 15 July 1989.

The hoax was easy to unmask and therefore the original post was deleted after a few days. Retractions were published by many newspapers and press agencies to the extent that we can say that the debunking process went viral, too. However, some fact-checking articles about this story still qualify use of the image with comments such as: "It doesn't matter if the image showed a rock concert: it aimed to show a mass of people and this is, actually, the reality of what it is showing."

This example shows that when it comes to unmasking fake news, it is not enough to concentrate only on the debunking strategies to determine that the news is fake. Critical thinking is even more important to induce the user to step outside of the echo chamber of their own prejudices and start to think critically about the persuasive intent of disinformation. Thus, it is essential that the above-mentioned competences are embedded in a pedagogical programme.

The following chapters will provide step-by-step guidance on how to implement the methods explained above in a short module, in class or other classroom-like settings.

Chapter 3

Starting the short module: enquiry-based learning and research on fake news

**Ulrich Ballhausen (IBFQ Hannover) and
Richard Heise (University of Hannover)**

What can be expected from this chapter

This chapter presents an overview of the process envisaged for a short module of enquiry-based learning focused on fake news, with a focus on the first step of this process, in which students do research on a topic connected to fake news. It serves as a guide for teachers to conduct enquiry-based learning with a group of students and explains the advantages of this method in the context of dealing with fake news.

Which domains of digital citizenship are addressed in this chapter?

The implementation of the methodology of Digital Resistance in class begins by boosting media and information literacy (Council of Europe 2018a: 2) through a hands-on approach. Students are supported to conduct their own research on pieces of information from the internet. By analysing these news items, they learn to distinguish between trustworthy sources of information and fake news. Another important aspect of the approach of Digital Resistance is access and inclusion (ibid.). This chapter provides guidance for teachers to enable all students in a particular group to participate in the research process, regardless of their previous knowledge or the technical equipment they can access.

Structure of the short module

Research on fake news or misleading information connected to discrimination or indoctrination is complex. On the one hand, it requires a broad range of digital competences, as described in the previous chapters. On the other hand, a proper learning environment is necessary to bring these competences into effect. Enquiry-based learning matches those requirements due to its motivational and methodological aspects.

Since this method is strongly linked to a problem-solving scenario, it fosters an intrinsic motivation to conduct research. Instead of focusing on external motivation through grades or other rewards, enquiry-based learning tries to support students in developing their own goals. Nevertheless, intrinsic motivation cannot be taken for granted.

“The willingness to deal with the problem, cannot be assumed automatically ... The obstacle has to be obvious to the individual in order to feel it.” (Dostál 2015: 69)

Therefore, the choice of topic is important to achieve a motivating awareness of the problem. Additionally, students need enough self-confidence regarding their own ability to solve the problem.

If a basic interest in the topic of the research object is assumed, another motivational factor for enquiry-based learning is the close relation between the research environment, research methods and research object.

“Modern support for inquiry-based learning comes from research in cognitive science that provides evidence for the importance of activity and authentic contexts for learning” (Edelson, Gordin and Pea 1999: 2).

Enquiry-based learning is an appropriate method for students to do research on fake news or misleading information connected to discrimination or indoctrination because it allows them to use research methods that are closely linked to the particular research object. This research process teaches students to critically evaluate information rather than simply absorb given facts. In this way, it supports the development of competences that are essential for dealing with fake news or misleading information.

The basic way to identify a research topic in an educational setting, as suggested by this project, is to find a single case where the distribution of such things as fake news, misleading information or disinformation is used online to spread discrimination or indoctrination. These pieces of information can be found on social media channels, news blogs, and so on. Students should do research on suspicious material based on their own observations or on the basis of a public debate on the subject. More information on indicators of fake news can be found in Chapters 1 and 2.

An advanced learning setting can incorporate a comparative approach where students analyse different singular cases of fake news that are connected through a common phenomenon such as a real-world event, a famous person or a political party. It is also possible to do research on different cases connected to the same author by analysing the particular mechanisms of spreading information on the internet.

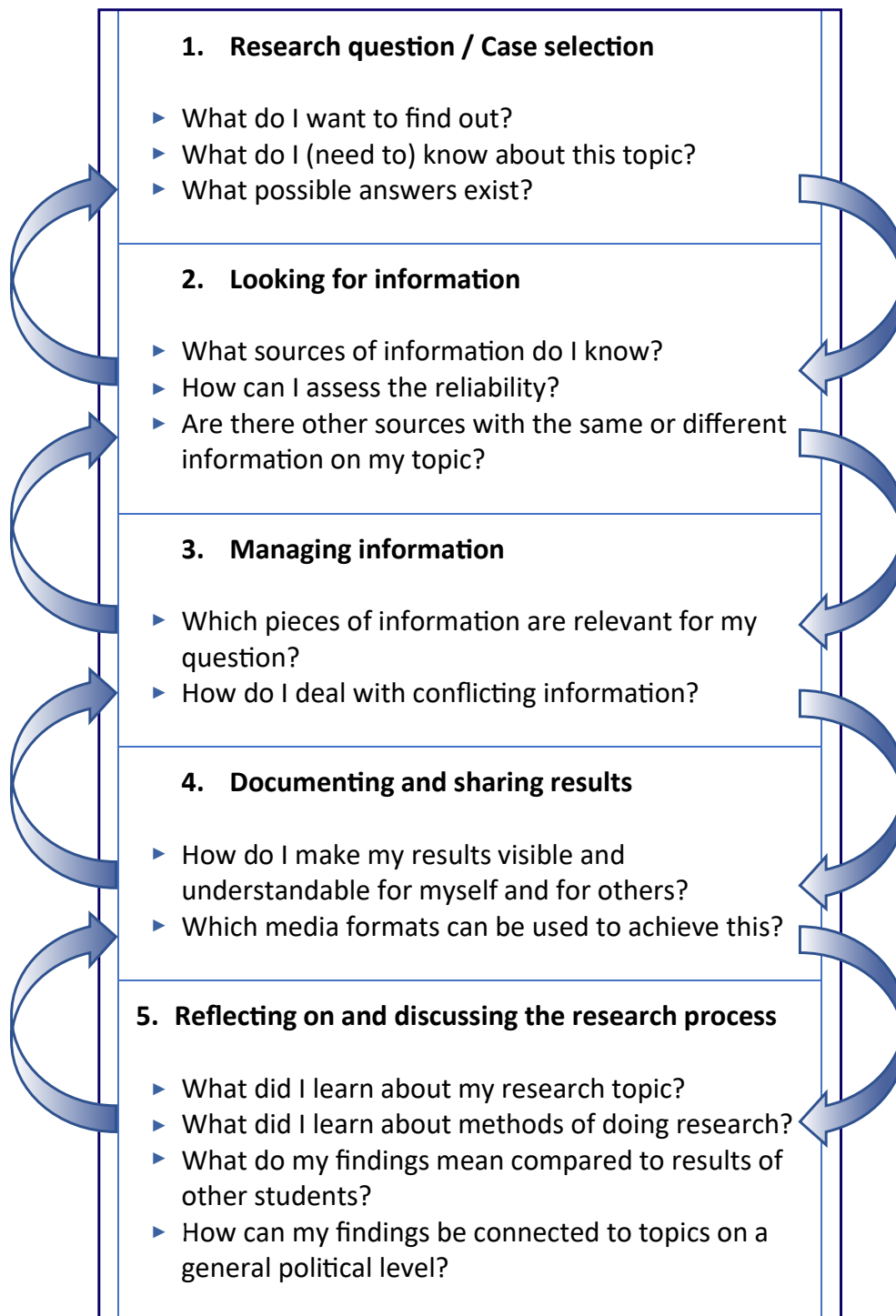
If students are willing and able to do broader research on the topic of fake news the teacher can introduce the topic of fake news in class and with the students identify different sub-topics or phenomena that are related to the spread of fake news or disinformation. The students then choose one of the topics to do further research on, for example on algorithms, social bots, filter bubbles, conspiracy theories, how to identify fake news or how to search for information. For more possible research topics, see Chapter 1.

Steps for the short module

The chart on the following page visualises the most important steps of the short module and provides questions that the student should ask as part of their research. All the steps are interdependent – students should be encouraged to look back at the previous steps to check if their answers have changed. Subsequent chapters consider aspects of digital output creation and peer-to-peer activities.

These steps are related to basic principles of scientific research. Particularly when dealing with information from questionable sources, it is crucial to follow these instructions.

For each working step, use the guidelines and tools for countering fake news introduced in Chapter 2.



Learning environment, preparation and schedule

Enquiry-based learning requires an adequate balance between the classroom setting and time for individual research. Experience suggests that groups of 15 to 25 students are most suitable for a classroom setting where the teacher introduces the topic at the beginning, provides basic guidelines for the whole group during the process, and evaluates the research at the end.

Conducting research on complex topics like fake news takes time. So, a well-thought-out schedule will need to take into account the amount of time students need to find reliable sources of information and reflect on their own research project as it proceeds.

The methodology as explained above should be implemented across at least three lessons in class, with individual working time or homework scheduled in between.

Students can do research at home using their private computer, a smartphone, the technical infrastructure of the school or a local library. It is also possible to co-operate with a university department, which might be able to provide helpful knowledge on specific topics, or even use of its technical infrastructure. If access to a computer with an internet connection is limited, smartphones can be used or students can do their research in small groups. In this case, the teacher is asked to make sure that all individual students get the opportunity to actively take part in the enquiry.

In fact, a short survey is suggested at the end of the last lesson before the module to draw up a list of the devices and applications the students are using to access online information. This might be combined with a survey of the cases or topics the students are potentially interested in. The information collected will be very helpful in preparing the first lesson.

The following chart explains the minimal schedule to implement the short module. If time is available, more time can be allowed for each of these steps.

Preparation

Teacher: Creating a text or presentation for the first lesson to introduce the topic of fake news (Chapters 1 and 2)

Teacher: Collecting possible research topics as examples

Teacher: Short survey of students' usage of devices and applications

Lesson 1

Teacher: Introducing the topic (What is fake news?)

Teacher: Explaining the schedule of the module

Teacher: Explaining the method of enquiry-based learning

Teacher: Guidelines for finding a research topic

Homework 1

Students: Finding a research topic (working step 1)

Lesson 2

Students: Presentation of research topics

Teacher: Supporting students in deciding on their topics

Homework 2

Students: Conducting working steps 2, 3 and 4

Students: Creating a media output that reflects and documents the research

Lesson 3

Students: Presentation of media outputs

Teacher and Students: Discussing and reflecting on the research process

Methodological guidelines for the research

Levels of enquiry

Banchi and Bell (2008) outline four levels of enquiry, beginning with the teacher posing the question and explaining the procedure, followed by students coming up with their own research questions and choosing procedural elements and methods by themselves. The fourth level is that of “open inquiry” (ibid.: 27). This level provides the highest amount of intrinsic motivation because students are free to pursue their own research goals, working with self-chosen methods.

The methodology suggested here aims at an open enquiry, because students should be facilitated to do research on issues that are connected to their everyday lives. Nevertheless, the methodology will only be successful if students are already motivated to deal with their questions and also possess the necessary skills and tools.

At this point the teacher is asked to support the students. Even though the teacher does not formulate the research question and does not determine the research methods it is very important to be able to provide guidance and pre-formulated examples of questions and methods if necessary.

Roles

Students fulfil the role of semi-autonomous researchers working on their own research topic. Digital Resistance facilitates them to find their own research topic about fake news or misleading information connected to discrimination or indoctrination. Once this is done, the topic and methodology should be presented to the teachers. If these are accepted, the students are free to do research and document their results within a time frame defined by the teacher. The results are then summed up in a media output in a format chosen by the students. More information on this can be found in the next chapter.

The teachers will need to set framing guidelines regarding the selection of cases, methods and the period of time that is to be granted to the students. Alongside, the teachers will focus on supporting the students and acting as problem solvers. Finding the right balance between the distance needed to avoid interference and the students’ need for support is a major challenge for teachers in enquiry-based learning. Further difficulties are connected to the unpredictable process of research. Technical or motivational problems might crop up, requiring competent support from the teacher. Enquiry-based learning assumes that many students are not fully aware of their abilities. Therefore, the goal should be to unlock this potential.

At this point, it is important to identify the students’ needs to keep them motivated and prevent early breakdowns in the research process.

Having a clear vision about the process of enquiry-based learning does not guarantee research without unexpected obstacles, but it helps teachers guide students in finding their way to their desired research goal. For students, it is also very important to be aware of the progress they are making in order to stay motivated.

Therefore, the teacher should use the first lesson in a classroom setting to outline the basic principles of enquiry-based learning, the topic of fake news, and the misleading information connected to discrimination and indoctrination that the students will be doing research on. On the one hand, it should be made clear that the teacher has confidence in the students’ skills to manage their research on their own. On the other hand, it is important to let the students know the teacher can provide support if needed.

A challenge in finding the right topic is the level of complexity involved. Students tend to choose projects that do not match their research abilities. Some students like to work on topics that are simple in order to avoid detailed research. Others are interested in highly complex topics that exceed their own research abilities and the framework the course provides. Here, the teacher is asked to enrich simple topics with interesting aspects and reduce the complexity of huge topics by guiding the focus of the student to an aspect they can manage. In this context, it does not matter if the research question has already been answered by others. It is more important that the student is curious about a specific topic and wants to find out more.

Another challenge is connected to the topic of fake news or misleading information itself: younger students may encounter material that is inappropriate for them. Here, the teacher should intervene and discuss the issue with the students. With younger students, the parents should be involved and eventually asked for permission. This way they can accompany younger students during their research at home.

1. Research question/case selection

If students are dealing with a single piece of information the main research questions should be:

- ▶ does the piece of information contain fake news or other related aspects?
- ▶ are there political motives behind it? If yes, what motives?
- ▶ has the dissemination of this information led to wider real-world events?

If the research design deals with different pieces of information the same research questions should be used, complemented with a comparison between the cases.

With research on broader aspects of fake news, the teacher should support the students in finding appropriate research questions for the chosen topics.

2. Looking for information

The second phase should include aspects that are particularly important for the topic of the project. Therefore, students should:

- ▶ perform preliminary background research and focus on gathering of information (across all types of online media formats);
- ▶ contact experts, journalists, politicians or scientists and focus on gathering opinions and perspectives;
- ▶ do in-depth research with focus on verification using high-quality sources such as news articles, academic papers, journals, books, peer-reviewed journals, government agency statistics or other non-partisan statistical sources;
- ▶ check their sources: social media can be helpful to identify a research object and obtain information on the context, and even professional journalists use this method. However, this type of research always has to be linked to a detailed check of the sources that were used.

3. Managing information

Subsequently, students should analyse and evaluate their findings. Is there evidence that information was “faked” or exaggerated? Was information placed in a false context? Did the author of a piece of information fail to include different perspectives on a certain topic? Typical aspects include the use of opinions rather than evidence, weak sources, strong language and images, simple messages aiming to create fear or anger, or the lack of contact information for the author. More detailed information on this can be found in Chapters 1 and 2.

4. Documenting results

The process of enquiry-based learning should conclude in the creation of a media output that sums up the findings of the research. This output can afterwards be used to enable peer-to-peer processes. More detailed information on this is provided in the following chapters.

5. Reflecting on and discussing the research process

The final lesson in the classroom setting should be used by the teacher to let the students present their findings and also let them critically evaluate their research process. It is very important to make it clear that research on a difficult topic may also lead to unsatisfying results. In this case the teacher should not give the students the impression that they have failed. They should have the opportunity to explain their difficulties. The methodology suggested by this project implies that students deal with pieces of information that are designed to cause confusion or misunderstanding. Being affected by misleading information is a significant experience, and to deal with such situations and discuss one’s confusion with others is already a very valuable result of the learning process. The fact of being unable to obtain a definitive answer to a research question can be addressed in the creation of the media output. Dealing with the results of the research process presents a great opportunity to connect the research topics to broader socio-political aspects, such as the effect of fake news on democratic systems.

Chapter 4

Creation of a digital output

**Elisavet Karakitsiou, Thomais Panagiotitsa
Spiliou and Konstantinos Asimakopoulos¹⁸**

What can be expected from this chapter

This chapter presents information about working step 4 of the short module. It provides a flexible framework that teachers can use to assist their students to create a media output that reflects and documents the results of the research process presented in the previous chapter. The following media types are covered in this chapter:

- ▶ presentations;
- ▶ posters;
- ▶ videos;
- ▶ animations;
- ▶ digital storytelling;
- ▶ blogs;
- ▶ wikis;
- ▶ podcasts;
- ▶ Instagram Stories.

Which domains of digital citizenship are addressed in this chapter?

This chapter addresses the domain of media and information literacy (Council of Europe 2018a: 2) by focusing on the ability to transform information gathered online into a media output that serves to summarise and visualise the research topic in question. A goal of this chapter is also to provide support for learners and learning environments with fewer opportunities. By offering a low-threshold concept for the work with digital media, the chapter also aims to cover domain of access and inclusion literacy (ibid.).

Introduction

It is common knowledge that in an increasingly digital world, teachers face the challenge of fostering digital literacy, media and information literacy, and digital citizenship in their students. Knowing the rules of the digital world is vital to being aware and active in modern societies. Globally, institutions use centrally integrated electronic learning environments that provide access to course documents, multimedia material, simulations, assessment tools, discussion forums and learning communities.

The wide range of digital tools available, such as apps, technological devices and online information sources, can make it difficult for teachers to know where to start. New technologies and associated pedagogies require a very different skill set from conventional teaching methods, and this can put additional pressure on teaching staff.

The main learning advantage of creating a digital media output is to put students in a position to deal with the pros and cons of different media formats. The notion that specific formats support the message that is to be disseminated in specific ways is closely linked to the use of media formats to spread fake news. By

¹⁸. Headmaster of the 1 EPAL Korydallou institute, Athens

experimenting with media formats, students are sensitised to the advantages and possible dangers of media production and consumption.

Creating a digital output

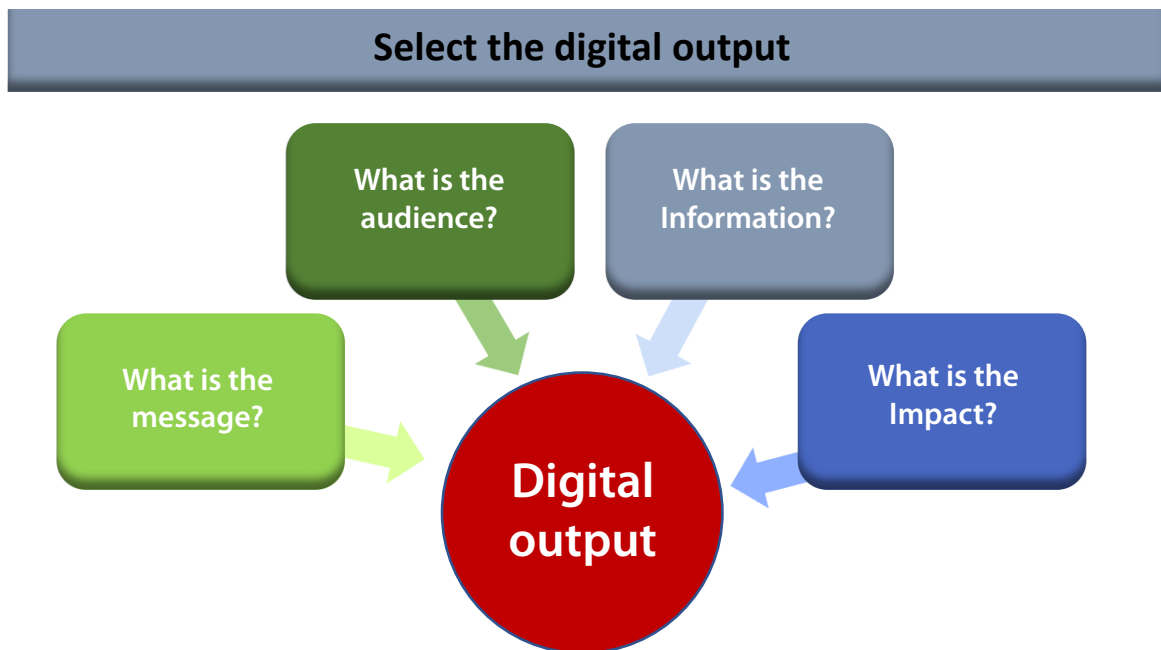
The creation of a digital output represents a crucial working step within the short module, because it asks the students to summarise their findings and learn from the research that they have conducted. Through enquiry-based-learning, they should be free to use media formats that fit their research topic. Since many students are already familiar with certain types of media production, they should be given the opportunity to express their preferences. Of course, enough time and the appropriate technical equipment is needed. Teachers can encourage students to use a variety of software on different platforms to create digital outputs. Different software can be selected according to their content or for special features that allow students to engage in a creative way with their material. Teachers can experiment with different approaches and examine the immediate impact. In order to assist students closely in the creation of their digital output, basic knowledge about the software and tools used by the students is required on the part of the teacher. On the other hand, students can also use tools that the teacher is not familiar with, as long as they do not require close support.

Although most schools are well equipped, teachers often fail to keep pace with technological progress. In some cases, teachers are so deterred by their lack of digital competence that they don't use certain technologies at all (Hew and Brush 2007). This chapter tries to provide some basic knowledge on digital technologies in order to motivate teachers to guide their students through the process of creating a digital output.

As soon as the assignment is determined and data has been collected and assessed, it is time to decide on how students would like to present their findings. Infographics or posters, enhanced web documents, documentary videos, podcasts/audio, blogs and social networking can be used for this purpose.

Considering the format brings to mind the famous quote of Marshall McLuhan from 1964: The medium is the message.

In order to decide which digital format suits the assignment best, four crucial aspects should be considered: the information, the audience, the message and the impact (guides.library.vcu.edu). Accordingly, critical questions should be posed.



Source: Karakitsiou E., Spiliou Th.

Considering the information to be shared:

- ▶ is it about trying to convey straightforward information or simplifying complex data?
- ▶ is it about information that could be easily conveyed through a still or moving image?

Considering the audience:

- ▶ who is the audience? other students, academics or a more diversified audience?
- ▶ is the audience composed of experts or learners?
- ▶ is the audience composed of people who agree with the ideas transmitted, people who disagree, or people who haven't formulated an opinion yet?
- ▶ what are the audience's own experiences, knowledge and personal set of values?
- ▶ is the audience physically present? If not, have you considered that the type of message should be easily shareable through the online platforms provided?

Considering the message:

- ▶ is the message delivered through words, sounds, or still or moving images?
- ▶ is the message going to be published on the internet and be retrieved online?

Finally, considering the desired impact:

- ▶ is it about trying to evoke an emotion and/or provoke a reaction and/or to inform?

In addition to the above questions, another question about the language of the digital output may be posed:

- ▶ what about the language barrier, if the output is to be shared with the world?

If the output is not created in English, it could include subtitles or an explanatory text or other non-verbal visualisation of the content that can be understood easily so the digital output is accessible to students of other countries. In general, one needs to consider what languages the intended audience uses. Multiple language versions of the output can be used combined with subtitles or explanatory texts. Students can also check what the text of the digital output they produce looks like in other languages by using automatic translation software and make adjustments to ease translation.

Different types of digital output are now presented, along with examples and suggestions for use.

Presentation

What is a presentation?

A presentation is the process of presenting a topic to an audience. It is a means of communication that can be adapted to various situations such as a demonstration, introduction, lecture or speech meant to inform, persuade, inspire, motivate or present ideas. For an effective presentation, it is essential to carefully consider step-by-step preparation, the method and the means of presenting the topic.

Why create a presentation as a digital media output?

A presentation using digital media gives students the opportunity to demonstrate the complex interaction between the different elements of the piece of fake news they are working on. Additionally, it is an easy way to disseminate the results to larger groups of people in class or further afield.

What are the key elements of a presentation?

Key points for preparing presentations:

- ▶ use one simple idea;
- ▶ use a title and design a layout;
- ▶ use the same font throughout in an easy-to-read size;
- ▶ define technical terms;
- ▶ list the main points;
- ▶ use visual aids to a reasonable extent;

- ▶ highlight the core question to be answered;
- ▶ make sure that you are familiar with the equipment required to create and display your presentation.
- ▶ Presentations offer you the chance to:
- ▶ have a straightforward interaction with your audience (observe their reactions to messages, adjust according to the level of their understanding and emphasise key points or provide explanations where necessary, including answering questions as soon as they arise);
- ▶ use the lecture format;
- ▶ receive immediate feedback.

The disadvantages of presentations include:

- ▶ the message is only given once in a mode set by the presenter;
- ▶ some people may not be able to be physically present;
- ▶ the impact on the audience relies very much on the presentation skills of the presenter;
- ▶ its academic nature makes presentations less likely to be shared on social media.

Preparing a presentation is a demanding task. Critical questions should be answered.

The context

- ▶ When and where will you deliver your presentation?
- ▶ Are you familiar with the topic or is it about something new?
- ▶ Does the topic cover simple information or complex data?
- ▶ Are you already familiar with the audience?
- ▶ Will the presentation be held in front of a small group or a large one?
- ▶ What equipment and technology will be available?
- ▶ What is the audience expecting to learn from your presentation?

Activity

Tackling fake news:

- ▶ Ask your students (organised into small groups with a maximum of five students per group) to select a publication according to their interests.
- ▶ Ask the groups to find out if news items are true or not, following the procedures and using the tools presented in previous chapters.
- ▶ Ask them to present the steps of their research, the tools they have used and their findings through a presentation in order to discuss it in the classroom. Help them incorporate screenshots, URLs and visual aids into their presentation.

General note:

The tool TeamUp (www.teamup.com) may be useful in forming groups of students according to skills, interests and so on, creating a digital classroom, or recording teams' progress.

Poster

What is a poster?

A poster is any piece of printed paper designed to be attached to a wall or vertical surface. Typically, posters include both textual and graphic elements, although a poster can be composed entirely of graphic elements or text. In the digital sphere, a poster could also be an infographic shared on a website.

Why create a poster as a digital media output?

By its very nature, a poster is designed to be both eye-catching and highly informative, with just a few words supporting the graphic design. It is used to communicate a message, to draw attention and spark interest, to summarise the main ideas, or to promote and explain research work. Like a presentation, a poster is suitable to visualise connections between different aspects of a complex research topic. It is also very useful to have posters for activities like an exhibition on fake news, as presented in the following chapter.

There are different types of posters, each used for different purposes:

- ▶ visualising a process via a diagram (process diagram);
- ▶ presenting a chronological sequence (timeline);
- ▶ presenting a collaborative result of research or investigation into a topic (poster presentation);
- ▶ listing key terms, similarities and differences (tables and Venn diagrams).

Creating a poster has many advantages:

- ▶ it is artistic and creative;
- ▶ it promotes peer-to-peer learning activities;
- ▶ it is inclusive for those students who prefer showing their work rather than presenting it verbally.

Its main disadvantages are:

- ▶ it is not really an original method;
- ▶ it is not very flexible if it is printed;
- ▶ it may be difficult to choose what information to include or omit.

Key points when creating posters

- ▶ Select the appropriate poster type.
- ▶ Be sure the title is short, focused and as large as needed.
- ▶ Keep the text size readable and the colours attractive and interesting without overdoing it.
- ▶ Support with graphics to illustrate findings and conclusions.

Video

What is a video?

A video is a visual multimedia source that can be defined as the recording, reproducing or broadcasting of moving visual images.

Why create a video as a digital media output?

Videos combine two things that catch the human attention – movement and sound. Both of these features are significant in conveying an efficient message. It encompasses all types of content such as text, music, photographs, links or podcasts.

Videos make information easier to understand. The use of short video clips allows for more efficient processing and memory recall.

The visual and auditory nature of video (Brame 2018) appeals to a wide audience and allows everyone to process information in a way that is natural to human reception. The possibility to pause the video or skip through sections in order to hold discussions or review particular areas is an advantage.

It is recommended to create a video as a digital output if the research topic itself is a video containing fake news. Used as a short movie, a video is suitable for students who like to present the findings of their research in a more appealing way.

Videos can be used by both teachers and students to:

- ▶ quickly explain something complex or new;
- ▶ efficiently demonstrate how to work on a subject;
- ▶ identify specific information within a particular topic by encouraging close observation of a video clip;
- ▶ capture, review and enhance the performance of individuals or groups through reflection and discussion.

Activity

Using videos

- ▶ Record students' interviews with each other or experts on a topic.
- ▶ Produce a fictional play.
- ▶ Produce desktop recordings or screencasts.
- ▶ Highlight the security risks of the wrong use of technology, for instance forgetting to log out and checking boxes for passwords to be remembered.
- ▶ Answer frequently asked questions about how to identify indoctrination or discrimination in social media.
- ▶ Provide advice on how to act against indoctrination or discrimination in social media.

The advantages of videos are:

- ▶ easy to visualise and clarify difficult notions or key points of the learning process;
- ▶ more interesting and engaging than texts or still images;
- ▶ holds the interest of the audience for longer;
- ▶ can be easily retrieved from online platforms anytime or anywhere;
- ▶ useful to explain step-by-step processes to students and teach them methodology;
- ▶ provide experiences through the incorporation of many kinds of creative expression (reconstruction of voices, faces, past situations, narratives, interviews, documentation, etc.).

But:

- ▶ videos can result in big/heavy files that cannot be easily sent, uploaded or downloaded;
- ▶ it can be hard and time consuming to find appropriate videos or to create a new video;
- ▶ they demand certain skills or expertise for a quality production and may require the involvement of many people;
- ▶ they involve equipment and may need a quick connection to the internet for uploading and downloading;
- ▶ videos can be distracting if they are not focused on what needs to be taught or highlighted.

Key points when creating videos

- ▶ Create short videos and integrate questions into the videos.
- ▶ Use audio and visual elements to convey information or explanations, making them complementary rather than redundant.
- ▶ Eliminate information that it is not needed and that may overload the memory.
- ▶ Use a conversational, enthusiastic style to enhance engagement.
- ▶ Use signalling to highlight important ideas or concepts.
- ▶ Make sure that the video material feels like it is current and that it was made for the specific audience in question.
- ▶ Make sure that you are familiar with the specialised equipment required to create and display videos.
- ▶ Avoid a stand-alone, long, explanatory video that lacks the power to hold the audience's attention.

Activity (Advanced)

How to tackle fake news

- ▶ Organise students into groups (a maximum of five students per group) and give them a piece of information/news item to verify. For this activity, it is recommended that students work on the same topic.
- ▶ Ask the groups to follow the methodology to deal with fake news explained in the previous chapters to find out if these items are fake or not.
- ▶ Ask the groups to do their assignment through recorded interviews of the students incorporating explanations about the procedures and tools used.
- ▶ Compile, with the students, the digital material produced by all the groups and make a short video on "How to tackle fake news".

Important

- ▶ You can use video-editing software that does not require very advanced skills or specialised equipment, such as the applications available on personal computers or smartphones.
- ▶ Approval from parents is needed to proceed with the recording and production of digital material with your students.

Animation

What is an animation?

Animations are a series of moving images created from drawings or models that are photographed or created by a computer.

Why create an animation as a digital media output?

Animations are a quick way to provide background understanding of a topic. They are also an effective way to get people engaged. They can improve the quality of knowledge for complicated subjects in a more pleasant and playful way.

An animation sequence contains much more information than a single image or page of text does and it can be very “pleasing to the eye” (Tan 2016). Animations can be used to convey information when it is relevant to communicate ideas or pass on information effectively, for instance to represent the footprint of a picture uploaded on social media.

Activity

Using an animation

- ▶ Simulate a real-life situation.
- ▶ Demonstrate an important feature of the topic or share important information.
- ▶ Demonstrate a typical search process that carries a high risk of leading to phishing.
- ▶ Simulate a process of avoiding indoctrination while using social media.

The main advantages of using animation as a teaching tool are:

- ▶ illustrating dynamic context and change over time;
- ▶ making learning more practical and task oriented;
- ▶ simplifying complex meanings;
- ▶ encouraging students to express themselves in an artistic, creative way;
- ▶ sharing work with peers in school or collaborating with students across the world;
- ▶ overcoming language barriers;
- ▶ promoting digital literacy;
- ▶ offering an excellent platform for students to cultivate presentation skills.

Disadvantages include:

- ▶ it is time consuming;
- ▶ it is difficult to fit computer animation programmes into projects or curricula;
- ▶ it requires special equipment, knowledge and expert help to produce a quality animation.

Key points when creating animations

- ▶ Present true-to-life situations faced every day (fake news, indoctrination on social media).
- ▶ Be aware of the skills required to create an animation (with programmes such as Animaps or Powtoon).
- ▶ Make sure that you are familiar with the specialised equipment required to create and display animations.
- ▶ Avoid long animations.

Digital storytelling

What is digital storytelling?

“Storytelling describes the social and cultural activity of sharing stories ... Every culture has its own stories or narratives, which are shared as a means of entertainment, education, cultural preservation or instilling moral values.”¹⁹

Long before newspapers and books were common, information passed from generation to generation through the oral tradition of storytelling. Consider digital storytelling the 21st-century version of the art of storytelling, using digital tools that allow anyone to create and share a story (EdTechTeacher 2018). Digital storytelling uses computer-based tools to tell stories.

Why use digital storytelling for a digital media output?

Storytelling allows the audience to connect with the context on a more emotional level. It can pose questions that people can relate to their lives and experiences and suggest compelling answers. Storytelling is a very powerful way to hold the interest of an audience, and it is particularly effective when it contains universal elements. A story can be time-limited and to the point.

Storytelling requires a range of collaboration levels and is usually the result of group/teamwork. It can be used to:

- ▶ evoke an emotion or provoke a reaction in an audience;
- ▶ leave scope for speculation about a number of unanswered questions that can be discussed at length after an open-ended scenario;
- ▶ cultivate high communication and collaboration skills.

Activity

Using digital storytelling

- ▶ Create open-ended or “what if?” stories about navigating the internet without consideration of the rules of personal data protection.
- ▶ Discuss the digital footprint in social media.
- ▶ Encourage a discussion about the experience of being a victim of indoctrination or discrimination.

The main advantages of storytelling are:

- ▶ encouraging creative writing in the form of innovative thinking;
- ▶ cultivating the imagination;
- ▶ promoting peer-to-peer activities during presentations;
- ▶ integrating multiple learning areas such as listening, narrating and reading;
- ▶ enhancing vocabulary and grammar;
- ▶ enhancing teacher-student collaboration;
- ▶ cultivating reading, listening and critical thinking skills;
- ▶ providing moral lessons.

Its main disadvantages are:

- ▶ it can be time consuming and involves a lot of preparation and guidance from teachers;
- ▶ topics may be difficult to address if they relate to personal values, an issue common in dealing with the fake news industry or indoctrination;
- ▶ they rely heavily on the teacher’s handling of the class.

19. <https://en.wikipedia.org/wiki/Storytelling>, accessed 4 November 2019.

Key points for digital storytelling

- ▶ Pace the story appropriately, ensuring it's not too fast or slow.
- ▶ Use voice, music or sound to create a mood or emphasise certain aspects.
- ▶ Eliminate information that it is not needed and do not get distracted.
- ▶ Make sure that you are familiar with the specialised equipment required to use digital storytelling.

Activity

The devil's advocate uncovers fake news

- ▶ Ask your students how a devil's advocate might argue against fake news.
- ▶ Produce a story titled "The devil's advocate uncovers fake news".

Blog

What is a blog?

A blog is a website on which a person or a group publishes new information regularly. A typical blog combines text, digital images, links to other blogs, web pages and other media related to the topic in question. A blog can also be a publication mechanism like a journal or bulletin. It is a tool that allows the sharing of ideas.

Why create a blog as a digital media output?

Blogs can facilitate group working (Bailey et al. 2005) or the exchange of ideas. They can promote open dialogue and encourage community building, as they provide digital space for comments, opinions, ideas and attitudes.

Blogs can be specific spaces for knowledge sharing or for dialogue supporting multiple media forms. They allow experimentation and digital interaction. They can be used to:

- ▶ promote online discussion, taking into consideration digital citizenship competences such as online etiquette and legal restrictions (e.g. plagiarism and copyright issues);
- ▶ motivate critical thinking about digital publishing (reading and writing) (Watanabe-Crockett 2018).

Activity

Using blogs

- ▶ Create a free blog on a portal like WordPress or Jimdo.
- ▶ Publish the results of the research process as text.
- ▶ Encourage peer feedback.
- ▶ Disseminate the blog to a larger community (outside of the academic community).

The advantages of blogs are:

- ▶ promoting autonomous learning;
- ▶ cultivating students' reading and writing skills;
- ▶ promoting, for both teachers and students, online creative engagement in education;
- ▶ saving time in class, as much work can be assigned as homework.

Disadvantages include:

- ▶ the need to ensure the privacy of the blog;
- ▶ internet accessibility issues for all students.

Key points when creating blogs

- ▶ Set clear roles and expectations and include detailed instructions.
- ▶ Take into consideration online etiquette and legal restrictions.
- ▶ Encourage interaction and peer-to-peer learning activities.
- ▶ Make sure you are familiar with blogs yourself.
- ▶ Do not assume that students have previous blogging experience.

Wikis

What are wikis?

A wiki is a website or database developed collaboratively by a community of users, allowing any user to add and edit content. A wiki page can be edited by anyone who has access to it, and this is usually controlled by password protection.

Why create a wiki as a digital media output?

Wikis support peer-to-peer learning/collaborative learning (Zheng, Niiya and Warschauer 2015) and problem solving. They offer a number of potential benefits including the ability to share information online, construct knowledge together, facilitate collaboration, and enable social learning and peer feedback (Rasmussen, Lewis and White 2012). Wikis also help to develop media and information literacy. They are suited to dealing with complex cases of fake news because they can be used to gather a lot of information and demonstrate their connections to each other.

Wikis offer students the opportunity to:

- ▶ engage in content;
- ▶ encourage interaction;
- ▶ have participants review and comment on each other's entries;
- ▶ maintain a resource repository.

But:

- ▶ creating a wiki can be very time consuming. Therefore, it should be created by a group of students that includes at least one experienced member.

Podcast

What is a podcast?

A podcast is a radio programme stored in a digital form or a broadcast accessible on the internet. In some cases, it can be downloaded from the internet and shared. The term originates from "POD", meaning Portable on Demand, and "cast", relating to its broadcast. Besides audio, podcasts can also deliver other digital media such as video, e-books and radio broadcasts.

Why create a podcast as a digital media output?

Podcasts are used for a range of products, from news and entertainment to education. The simplicity and the auditory support that they offer make podcasts excellent instructional tools. Podcasting is a way to promote collaboration and communication with a wide audience.

Podcasts may be classed according to their use:

- ▶ creating differentiated material matched to different abilities, needs and motivation levels;
- ▶ conducting interviews;
- ▶ disseminating research outcomes;
- ▶ making people aware of e-safety (safe and secure use of the internet and social media).

The benefits of a podcast are:

- ▶ they can be very influential and have a big audience due to ease of retrieval;
- ▶ they are popular among teens;
- ▶ they promote peer-to-peer activities and sharing;
- ▶ they can address trending topics.

Disadvantages include:

- ▶ the passivity of the medium in terms of allowing immediate feedback;

- ▶ a prior knowledge of the subject is required;
- ▶ the need for expertise and time.

Key points when creating podcasts

- ▶ Select the appropriate podcast type (e.g. interview, conversation, monologue, educational panel with interactions between multiple hosts).
- ▶ Choose simple podcasts that teachers and students are able to produce.
- ▶ Structure the content.
- ▶ Consider the duration.

Instagram account/Stories

What is Instagram?

Instagram comes from the words “instant” and “telegram”, suggesting a digital combination of Polaroids and telegraphic technology. It is a photo and video-sharing social networking service. Users can upload photos and videos (up to 10 minutes), which can be edited with various filters and organised by tag and location. Like any other social network, Instagram is based on having friends and followers. An account’s posts can be shared publicly or with pre-approved followers. Users can browse other users’ content by tag and location, view trending content, “like” photos, and follow other users to add their content to a feed.

Why create an Instagram Story as a digital media output?

Instagram is a very popular networking service, especially among young people, due to a variety of features such as Instagram Direct and Instagram Stories that ensure privacy.

Instagram Direct is a feature that lets users interact through private messaging, both permanent and ephemeral, in contrast with the previously existing public-only requirement. A message can incorporate website links and photos.

Instagram Stories allow users to take photos and add effects, layers and themes as well as live videos and stickers to a story that expires after 24 hours. Stories can be viewed publicly (in the case of a public Instagram account profile), by account followers (in the case of a private Instagram account profile) or by an authorised group (the creator defines a list of “close friends”).

In addition, the development of stand-alone applications with specialised functionality and a variety of third-party services using Instagram functionality (including overview of user statistics, printing photos and posters for social events, converting photos into thumbnails, and viewing Instagram on personal computers) make for a powerful yet regulated tool of dissemination.

Instagram can be used by both teachers and students to:

- ▶ easily edit a photo using available filters before sharing;
- ▶ quickly disseminate something new;
- ▶ ensure private or restrictive photo or video sharing;
- ▶ send private messages;
- ▶ create and promote a theme;
- ▶ create a global community with a flat-world feel that highlights similarities over differences and promotes a shared humanity.

Creating an Instagram account has many advantages:

- ▶ it can be artistic and creative;
- ▶ it is popular among young people;
- ▶ it can be used and accessed from portable devices (e.g. smartphones and personal computers);
- ▶ it can ensure privacy and limited sharing depending on the account profile;
- ▶ going by the principle “less is more”, Instagram stories can promote critical thinking;

- ▶ it can motivate students who want to promote their activities;
- ▶ it ensures high-speed dissemination.

Its disadvantages include:

- ▶ it may be difficult to select the information, photos or videos to be shared;
- ▶ an administrator who can implement a privacy policy may be needed.

Key points when creating an Instagram account/Stories

- ▶ Respect and ensure privacy.
- ▶ Quality beats quantity: select photos, videos and messages to be shared very carefully.
- ▶ Create responsible administration roles and privileges.
- ▶ Encourage interaction by asking questions in the photo captions.
- ▶ Create memorable hashtags.
- ▶ Create a theme.
- ▶ Tag other accounts when relevant to increase dissemination.
- ▶ Be consistent in posting and sharing.
- ▶ Track the progress of the account/Story.

Activity

Use social media for good

- ▶ Create a private Instagram account addressing fake news.
- ▶ Motivate your students to follow, promote and share the account. Then ask them to pick up some fake news timelines and create stories to upload. Students can also enrich stories presenting their work in uncovering fake news with interactive elements such as short questions, quizzes or games to motivate their audience to participate.
- ▶ Encourage your students to regularly post photos or videos related to their subject of research or their work process. Commenting on and “liking” their peers’ posts is likely to enhance their own work and motivate them to produce quality work to combat fake news and share it with others.

Challenges and limitations

Digital technologies in themselves do not necessarily constitute an enhancement of the quality of learning and teaching, and it is indisputable that quality of content must remain paramount. New ideas about the physical and psychological aspects of technology could arise as students start to use these technologies at a very young age and develop in some cases addictive behaviour, or suffer from health problems caused by overuse (e.g. photosensitive epilepsy, posture and sight problems) (Cambridge Assessment International Education 2018). Teachers must be prepared to recognise and resolve these problems at an early stage (uhs.umich.edu/computerergonomics 2018).

However, digital tools can be used as stimulation for such enhancement of quality and can underpin efforts towards more student-centred teaching. Teachers now have the opportunity to draw on a wide range of materials in a variety of formats that can improve the quality and diversity of the curriculum. Students are unique, and so are the ways they learn.

To make the best use of digital outputs created within the short module, teachers are recommended to set up peer-to-peer activities, discussed in the next chapter.

Chapter 5

Sharing the results of the research process

Anca Harabagiu, Georgeta Oprea (Buzău County School Inspectorate)

Cristina Iacob (National Pedagogical College “Spiru Haret”, Buzău)

Laurentiu Tepelus (National College “B.P. Hasdeu”, Buzău)

A guide for activities using peer-to-peer learning

What can be expected from this chapter

This chapter presents information about the sharing of research results. It explains the importance of peer-to-peer learning between students in relation to the strategies that have been presented on how to deal with fake news. It provides useful information and practical activities on how to conduct peer-to-peer activities in school and online to make use of what the students have achieved in the previous steps of the module.

Which domains of digital citizenship are addressed in this chapter?

The essence of peer-to-peer activities is the sharing of knowledge and opinions between persons of a particular peer group. In a classroom setting or in the context of online platforms it enhances access and inclusion (Council of Europe 2018a: 2).

Peer-to-peer learning

“Peer-to-peer learning”, sometimes just called “peer learning”, is a teaching and learning strategy where learning results from the interaction between people in a similar situation, and who are not in the position of being a teacher or an expert. It may involve groups of students working together to solve a problem, complete a task or create a product (Council of Europe 2018e).

Peer-to-peer learning is closely linked to the concept of co-operative learning (ibid.: 32), but puts more emphasis on the aspect of sharing experiences and the transfer of knowledge and information between peers.

Peer-to-peer learning is an educational strategy and it encompasses a large range of activities involving discussion sessions, private study groups, peer assessment schemes, collaborative projects or laboratory work, workplace mentoring and even community activities.

There are also considerations regarding implementation of peer learning: preparation of both students and staff for working with particular peer learning strategies, continuing roles and responsibilities; managing the process and the introduction, support and evaluation of the process. Student attitudes towards peer assessment are positively influenced by the training they receive and experience that they have in prior peer learning (Zundert et al. 2010).

The strategy implies that students learn a great deal by explaining their ideas to others and participating in activities in which they can learn from others. They give each other feedback and they evaluate their own work. After they become accustomed to the method, the students take on the teacher's role, giving instructions to their colleagues. Student-to-student dialogue is developed. This may take place in groups or with the entire class. Peer learning develops the ability to make choices and to take initiative and makes work more personal (Boud 2001).

In "How to implement peer learning in your classroom", Johnston (2009) lists the advantages of peer-to-peer learning that positively affect various aspects of learning processes among students combined with the enhancement of basic social skills, like the ability to work in teams with other students. In order to safeguard successful peer-to-peer learning, teachers should prepare an adequate learning environment and working groups.

More hands-on instructions can be found here:

<http://eprints.lincoln.ac.uk/19430/1/How%2Bto%2BImplement%2BPeer%2BLearning%2Bin%2BYour%2BClassroom.pdf>

In the context of dealing with fake news the method of peer-to-peer learning has another advantage: it simulates the process of receiving, managing and sharing information that is characteristic of online news and potential pieces of disinformation. In this way, students discover effective methods of tackling fake news that they can implement in their everyday lives. The following sections provide examples of how to implement peer-to-peer activities at school (or other educational contexts) and online.

Peer-to-peer activities

Organising an event on a larger scale gives students the opportunity to present their media outputs. It serves as a culmination of the learning process, allowing students to reflect on the findings of the research process and share experiences with other peers or other groups such as teachers or parents.

1. School exhibition with fake news activities

Exhibitions are among the oldest educational approaches and are very commonly used nowadays as integral parts of the learning process, and to associate formal and informal learning. Potential participants are students, teachers, parents, the local press, politicians or other public stakeholders. An exhibition that includes student stands is ideal for presenting a range of media outputs, and can use posters, short movies or other media formats. Interested visitors can have their queries answered as well.

2. Organising school conferences/seminars/workshops

Events such as conferences, seminars or workshops facilitate face-to-face interaction and present opportunities to learn and improve one's knowledge in new areas. Live events push participants out of their comfort zone, transform conventional ways of thinking and may change participants' takes on society, especially in the context of identifying disinformation and fake news.

While seminars or conferences represent a traditional way of presenting information, workshops are characterised by their practical aspects. Participants interact with one another, exchange ideas and work together to obtain concrete results.

Such formal meetings are an accepted method of gathering students and teachers to discuss ideas or address problems that affect them. But planning such events may require time.

3. Workshop on fake news and disinformation

A workshop on fake news could be a starting point. It could be used to shed light on a complex case of online disinformation, or it could be organised with the aim of producing an item of fake news and testing the reaction of participants. Either way, the organiser should think of the workshop as a session to prepare students to solve problems as they occur rather than "defeat" fake news once and for all.

Workshop groups should be formed around a project such as writing a document and should consider what information is fake and what is not, collaboratively investigating the problem. Participants can be asked to create a game, a quiz, a cartoon or a presentation, and these should be designed to convince each other to be well-informed about the news. The organiser should impress upon participants the effects that fake news may have on people's lives.

Peer-to-peer activities online

As a parallel process to the above-mentioned activities for peer-to-peer activities using face-to-face interaction, several online possibilities allow students to share the experiences of their research. It is recommended to combine both offline and online methods to let students interact with different groups of people in different contexts. This approach ensures that students benefit from the positive aspects of peer-to-peer activities, namely communication across a flat, non-hierarchical structure, as well as the advantages of online communication, namely the possibility to be connected with people from other contexts and encounter their perspectives.

The recommended way of establishing peer-to-peer activities online is to find an online platform that gives students the opportunity to upload their media outputs and share their experiences. In order to let other students view the results, they also need access to the platform and should have the possibility to comment and get in contact with other users of the platform.

Within a more complex approach, a newly created online platform based on systems like Moodle or Ilias might be useful to let teachers manage their students and assist them in uploading their material. Other classes or groups of students can use the platform at the same time to enable peer activities. These kinds of platforms also allow the creation of a forum for more in-depth discussions about the material presented on the platform.

It is also possible to use already existing platforms like the online forums of schools or social media platforms such as Facebook or Instagram. The use of social media has the advantage that students might already have an account on specific platforms that they can use to share their outcomes. In this case, serious consideration needs to be given to data protection. Closed groups on Facebook or private accounts for Instagram may be helpful, even though they limit the outreach of shared material.

Activity

Peer review

In order to stimulate peer-to-peer activities on a more in-depth level, teachers can use in-class assignments as a parallel process. One example is the technique of peer review. Each student is instructed to choose a media output presented or uploaded by another student and ask questions about the research process. For example:

- ▶ Why did you choose this topic?
- ▶ How did you manage to find more information?
- ▶ Was it easy to come to a conclusion or do you still have questions?
- ▶ What did you learn from your research?

After these questions have been answered, the results can be presented in class. This type of exercise is particularly fruitful if it connects students from different schools or countries.

Conclusion

The co-operative process of conducting the Digital Resistance project and creating this handbook was an interesting challenge, mainly because of the complexity of the topic of fake news and other related aspects like indoctrination or discrimination online. It became clear that the outcomes of this project can support teachers who are willing to face up to the challenge by providing background information and teaching material. Nevertheless, there are no shortcuts to the goal of differentiating between fake news and trustworthy information on the internet. The main obstacle, however, is the fact that many pieces of information that travel across the internet and might be labelled as fake news consist of a confusing mixture of particles of truth combined with made-up facts, political statements, distorted statistics and lurid headlines. The result is many possible research topics located in the grey area between “fake” and “true”.

Therefore, the objective of this project was merely to sensitise students about the dangers of fake news and provide them with practical tools to analyse information on the internet. These basic steps should strengthen their resistance to fake news that attempts to indoctrinate them or encourage discrimination.

Teachers and parents are not able to substitute for the ability of young people to orient themselves in the digital sphere. In a situation of rapid technological change with massive effects on the way we receive information and communicate, the only way to establish forms of fact-based online discussion is to focus on media and information literacy for students.

This project is only a small part of the process of moving towards a transnational concept of Digital Citizenship Education, but the experiences of co-operation between educational organisations and schools from five different countries that also fed into the creation of this handbook should support and encourage teachers, schools and educational authorities to include this topic in their curricula.

A major lesson was the need to give both teachers and students enough time. It was considered essential to spare at least a session (or an hour) for introducing the topic and having time for evaluation and discussion at the end of research phase. Addressing a topic like “fake news”, particularly through the method of enquiry-based-learning, brings up so many didactic questions for teachers and challenges for students that both sides need time to rethink their approach. Of course, most curricula have a tight schedule, and this requires teachers to come to quick decisions regarding their students’ learning processes. On the other hand, letting students think about a complex topic like this, which has far-reaching connections to their everyday lives, will have positive effects that should not be underestimated. Since it is a major feature of fake news to take advantage of the limited attention spans of most online users, the consumption of online news is always fraught with the risk of receiving misleading information or being misinformed by made-up stories.

Another lesson can be drawn from the transnational co-operation on this topic. The different perspectives of different countries and people with different cultural backgrounds, including the varying media landscapes and interactions with political systems, makes it a challenge to agree on common definitions and approaches. Nevertheless, the majority of participating students expressed an intrinsic motivation to protect themselves from the dangers of fake news, rating a more objective, fact-based perspective as a worthwhile goal. Individual competences in the field of media and information literacy are important to achieve this goal. However, on the path of objectivity there is no alternative to an openness to diverse opinions and a willingness to interact and share perspectives with people outside one’s echo chamber.

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