

Guide BOOMERING

A BEHIND
THE SCENES TOUR



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Foreword

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Before the Covid-19 pandemic, our organisation observed a significant difficulty in encouraging some young people in taking part in their community as citizens. One cause we identified was their being exposed to more and more false information (conspiratorial or pseudoscientific theories, defamation, hate speech, etc). Disinformation tends to shut people off from a nuanced understanding of the world, shared by people they interact with on a daily basis: family members, friends and classmates, teachers and other hobby and sports tutors. Social distancing, lockdowns and the informational confusion that made the year 2021 further weakened these special bonds.

School is not and should not be the final and ultimate space to learn. The European Charter of Social Rights includes the right to lifelong, quality and free education, training and learning for all.

The Boomerang project was for our consortium a great opportunity to make a contribution and allow for more people -who are not the usual targets of similar disinformation prevention and digital literacy initiatives- to access new knowledge, skills and quality resources, and through them gain confidence in their ability to be guiding forces for young people in their lives.

Three years of intense work later, we wrote this guide to let you in on the project's backstage secrets, from the challenges we faced to the solutions we cooked up, in the hopes of giving others the idea of coming together and continuing the work. We believe this is the necessary condition to building inclusive, caring, responsible and resilient societies for the empowerment of all and especially of our youth.



Welcome to the **BOOMERING** Project

Welcome to
the Boomerang project!

A toolbox for media literacy
and self-critical thinking!

The 2022 Eurostat study on [ICT¹ usage in households and by individuals²](#), showed that a majority of European citizens use the internet to read about the news (72%), a 2 point increase compared to 2016. It is rather safe to say that the internet and social media are becoming increasingly hard to live without nowadays. From checking in with loved ones to watching shows and tutorials or simply scrolling through content to pass time, all sorts of information is just a flick-of-the-wrist away, accessible anywhere and at any time, almost instantaneously with the right equipment.

Whether riding in shaky and noisy public transports or sitting on the couch in the comfort of our own home, anyone can stumble across a suspicious post or website while checking their newsfeed. More often than not, misleading and fabricated content catches us in our most vulnerable moments, when we are too ill-equipped to investigate further. *Our smartphone's screen is too small to see all the details of an AI generated image, or we are too tired to read a full article with a clickbait title.*

It is easy to dismiss this type of content and keep scrolling, but what if the same problematic piece of information comes back further down, shared by a different person or account?

This **boomerang effect** is where the Boomerang project takes its name from! Worried it might undermine the first principles of online research as currently taught in schools -multiplying and crossing sources- and in the process negatively impact teenagers' and young adults' mental health and relationship with truth, a team of 14 experts from France, Italy, Slovenia and Spain have come together to try and tackle the problem of online disinformation.

Far from being yet another fact checking or debunking initiative, the Erasmus+ **Boomerang project** is a pedagogical toolbox of four tools specifically designed for the extended community of professional and volunteering Educators³ who feel they are losing touch with young people they fear have been exposed to and/or believe in false information.

Exposure to dis- and misinformation can have dire consequences on individuals' peace of mind, personal balance and informed participation in society, to the extent of justifying hate speech and acts of violence. The **four tools** of the Boomerang toolbox tackle all aspects of these phenomena: the themes, the types of content and unethical practices that allow false information to spread. They aim to **raise awareness, (re)establish dialog and empower teens, young adults and adults** by promoting critical, collective and intergenerational ways of receiving information.

1. Information and Communication Technologies

2. https://ec.europa.eu/eurostat/databrowser/view/ISOC_CL_AC_L_custom_3155190/bookmark/table?lang=en&bookmarkId=b5c00b47-d10e-45fc-ae2e-a578fe478ef1

3. By Educators, we mean the extended educational community which includes professionals and volunteers working in youth organisations, sports and hobby clubs, as well as parents and any other adult part of teenagers' and/or young adults' environment.

BOOMERING

behind the scenes

As it poses a growing threat to individuals' peace of mind and countries' democratic life, the spread of false information and manipulative content online has become a major concern of today's European citizens and institutions. For that reason, we need more people and more organisations to come together and carry out projects for the empowerment and digital literacy of populations. The pages you are about to read were written to take you, a fellow European project conceptor or one to be, on a behind the scenes tour of the Boomerang project.

How did we create the tools? What were the highest and lowest points we have hit along the way? What have we learnt in the process? And perhaps even more crucially: what needs to be done now to keep up fighting against disinformation? By looking back on our experience, we hope to give you all the answers you need!



Another fact-checking initiative?

In 2019, project partners first met to discuss the influence of online disinformation on youth violent radicalisation. Experts from Iceland -who eventually left the project- explained the role of far-right survivalist and white supremacist propaganda in terrorist attacks. French partners also shared their concerns over how anti-western conspiracy theories fuel the indoctrination of young people into armed Jihad. Though each team had different representations and experiences of radicalisation in their country, together they found that online disinformation is one way of recruiting into extreme groups.

The Covid-19 pandemic further shed light on the dire need for critical thinking skills and digital literacy that can live up to new found challenges!

As we turned to online spaces during lockdowns, we faced increased risks of being exposed to erroneous, misleading or fabricated content regarding the disease, vaccines and public health policies. Discussions with strangers, friends and loved ones online became tricky, if not impossible, as conspiracy theories and pseudoscientific statements severed ties to a common basis of understanding the world.

False information distorts reality by omitting, manipulating or inventing new details. People who genuinely share false information also tend to anchor their beliefs to a community of other like-minded "knowers" singled out from the flock of "ignorants" who still believe mainstream narratives. They require a complex care and support system that goes in order to set aside their distorting glasses. On the other hand people who feel they may be struggling to critically assess online content, or are witnessing loved ones fall out of touch because of intense exposure, are in need of resources to prevent further damage. They could be worried parents, professionals or volunteers working with teenagers and young adults, struggling to find ways to spark conversations about complex topics cluttered with false or misleading information.

Our consortium was specifically built to imagine appropriate tools to empower these Educators. False information often requires a plethora of expertise in order to be thoroughly debunked. "New" proof of the Earth being flat will ask that astronomers, physicists and historians scrutinise and counter-argue each point. With pedagogy experts, university scholars, advocates for psychological manipulation, a mental health professional and a technical consultant on its board, Boomerang is better qualified to focus on new methods supporting critical thinking rather than trying to define objective criteria of truth.

Such an approach could have been misinterpreted as an attempt to dictate what people should or should not believe and undermine their self-confidence in the process. Critical thinking goes beyond the ability to differentiate what is true from what is false. It relies on sets of skills and attitudes, one of the most important being **reflexivity**. Surveys have multiplied in recent years and resulted more in viral headlines about how "90% of gullible people have already believed one fake news piece" than a comprehensive account of disinformation. However the catchy claim shows how short-lived trust in false information really is. Most respondents were able to admit to having believed a fake news piece precisely because they have come to realise they were deceived or mistaken.

What we have learnt from experience is that any European project that tackles online disinformation, digital and media literacies as well as critical thinking, should work from the already existing resources and strengths of their targeted audience. This is why we have conceived our tools as entry points to reaching out and connecting with others: Story Maps gives the opportunity to learn more about disinformation and teenagers' feelings to it in neighbouring European countries, chatbot Talos allows users to identify and contact expert organisations that can provide support, and Pareidolia can be used as a way to raise awareness on sharing misleading images.

Udaf 82

Project coordinator

The Departmental Union of Family Organisations of the Tarn-et-Garonne (Udaf 82) is a non-profit organisation based in Montauban, France. Through its services and local network, it works to defend families', people with disabilities' and vulnerable populations' access to their fundamental human rights such as autonomy, freedom of choice and housing. As coordinator of the Boomerang project, the Udaf 82 was responsible for organising meetings, drafting shared work documents and implementing project results. The team includes director Stéphane MICHELIN overseeing all operations, deputy director and GDPR expert consultant Isabelle BONNEFOUS, as well as psychologist Thérèse BOUCHE, who specialises in the indoctrination and religious radicalisation of youth.

University of Ljubljana

Project partner

The University of Ljubljana is the oldest and largest higher education and scientific research institution in Slovenia. It is renowned for its high-quality study programmes in the social sciences, natural sciences, humanities and technical sciences, prepared according to the guidelines of the Bologna Declaration. It offers educational programmes in 23 faculties, including Faculty of Arts. For the benefit of the Boomerang project, the Faculty of Arts collaborated with members of the Department of Geography and the Department of Educational Sciences, who contributed relevant knowledge from both fields.

Udaf 59

Project partner

The Departmental Union of Family Organisations (Udaf Nord) based in Lille, Northern France, is a non-profit organisation created in 1945 under the 1901 law. Its missions are established in the social work and family code: representing families and defending their interests, engaging in legal action in civil courts against proceedings that constitute a threat to families' moral and material interests, and offering any family support service that public authorities entrust to it. Other resources include an Information Desk for families. The Udaf Nord is also recognised as an autonomy relay.

CAFFES

Project partner

For 40 years now, the National Center Supporting Families Against Cult-like Influence (CAFFES) based in Lille, France, its administrators, professionals, volunteers and other contractors, have gained significant experience in providing support to families who are experiencing undue influence from cult-like groups through its family, psychological, legal and social counselling services, as well as information and prevention activities. The 1901 law organisation is a certified Youth and Popular Education association complementary to public schools, which allows the CAFFES to host workshops and create tools such as comics, animated and short-films, in order to raise awareness amongst young and adult audiences, as well as amongst professionals working in a variety of fields (health, social, education, justice system, etc).

Politique Numérique

Project partner

Politique Numérique is a French company that specialises in developing innovative multimedia projects. It seeks to adapt to the deep transformations generated by the fast evolution of Communication and Information Technologies, and to understand its impacts on our daily lives through constant exposure to mediated and preformatted ideologies. For 20 years, it has worked in the field of digital innovation by initiating or contributing to projects with other partners across Europe. Its activities include counseling, production, development and blended learning. Its founder and CEO Philippe LE GONNIDEC has created and run several startups in France and the USA. He continues to work with a variety of European institutions and universities. For the Boomerang project, he helped develop intellectual outputs Talos and Pareidolia, as well as the MOOC modules.

Laboratoire CIREL University of Lille

Associated partner

A space of research, production of knowledge, critical thinking and openness to the world within the University of Lille, the CIREL laboratory is a scientific unit dedicated to contributing to research in education and training. Masters of the Department of Educational Sciences (including the MEPOT master) are associated with this laboratory. These programs articulate fundamental research and action research or direct intervention with professionalisation purposes in the fields of pedagogical work and counselling, prevention, mediation and the analysis of existing services.

Glocal Factory

Project partner

Glocal Factory (Verona, Italy) is a network joining a Social Cooperative and a non-profit Organisation. The former was created in January 2018, while the latter was founded earlier, in 2015, by experts and volunteers in order to design and implement EU projects in social and educational fields. Our commitments -through EU projects, international training, research and seminars- includes:

- **EDUCATION**, i.e. innovative contents and methodologies in formal, non-formal and informal educational settings for children, teenagers and adults;
- **SOCIAL INCLUSION** of migrants, vulnerable and disadvantaged people;
- **ENTREPRENEURSHIP** and **LABOUR INCLUSION**;
- Youth **CIVIC PARTICIPATION** and **ENGAGEMENT**;
- **FIGHT AGAINST** racism, xenophobia and violence against women.

For Boomerang, GF is involved in implementing the project tools and coordinating the production of **Pareidolia**. The team includes: Cristina DEMARTIS, social pedagogue; Maria Carla ITALIA, expert in communication and media, with a specific focus on political communication; Anna SCHENA, graduated in philosophy and expert in youth participation.

Campus Arnau d'Escala

Project partner

The Campus Arnau de Escala Foundation (FCAE) is a meeting space for social service professionals, researchers and public agents, as well as the general public. Its main goal is to improve quality of life for the most disadvantaged groups in our society. Since its creation in 2001, the Foundation has promoted interaction between social agents to identify the needs of the sector and enable the design and implementation of studies and necessary research to meet them. Research results are conveyed through training and advisory programs, publications and organised events. Since 2012 we have been sharing our work with international agents, mainly through European programs that aim to educate and train different professional fields, as well as the general public. FCAE participates in the development and dissemination of the Boomerang project results. It coordinates the development of training products in the form of MOOCs & Blended learning.



STORYMAPS

What is it?

StoryMaps is an online platform exploring the mechanisms and consequences of misinformation with definitions and people's lived experiences, illustrated with interactive maps and infographics¹.

Who is it for?

The tool is for education professionals, teachers, parents and young people who would like to understand and know how to deal with misinformation on a daily basis.

What is it for?

Using an example-based approach, thematic infographics and interactive maps, the tool aims to help users actively confront and learn about misinformation, as well as differences and similarities in issues it causes between countries.

How does it work?

During the creation process, hundreds of photos were used by Boomerang partners as examples of visual illusions or false interpretation. You can download the complete database of images from the official Boomerang website and use it as a didactic, educational game to play at school or at home. Players can send pictures to their friends and discuss interpretations, or look together for new pareidolia images to share and ask each other: "What do you see?"



1. <https://storymaps.arcgis.com/stories/da5510965e6e4dada63832b5296789f4>

Are there differences in the occurrence of false information between partner countries?

Our **Mapping** tool was designed to answer this question. However the answers we collected from our transnational survey were incomparable due to extremely uneven geographical patterns of respondents within and between the studied countries. Only for Slovenia was the number of respondents and their geographical distribution satisfactory. As we gathered data on national education levels, general life satisfaction, young people's values and topics they consider important in life, we realised that there are small but significant differences between represented countries. We also encountered a diversity of most prevalent false information between and within countries. However we cannot support these observations statistically.

How should we ask adolescents and adults about false information?

In order to identify false information and study their geographical distribution, project partners disseminated an online survey asking teenagers, young adults and adults about examples of false information they have encountered. Young people were asked specific questions about their emotional reaction to the example(s) they gave as well as how they think the latter may have influenced their behavior. Our survey gave space for all participants to describe a misleading, false or fake piece of information, rate their level of belief and the intensity of their reaction to it. Young respondents were invited to point out which feeling (fear, anger, anxiety, joy, etc) they associate with the information and indicate its frequency of occurrence, the impact it had on their behavior and the way they think. They were also asked if they shared it to others and/or checked if it was true.



Why use StoryMaps or narrative maps over other tools to present NCDs in partner countries?

The goal behind the StoryMaps tool we developed is to help young people understand that differences in misinformation occurrence and reactions to it are to be expected from one country to the other. We thus worked to produce thematic maps and infographics through which young people can learn about significant discrepancies between countries and how to explain them with geographical and contextual elements. We found that StoryMaps was the most appropriate tool to present our results. We built it in such a way that young and older users can create their own story by exploring the three different chapters and the many possibilities and infographics they have to offer.

Chapter 1

is an introduction to the field of misinformation. “Fake news” is just one possible form of misinformation. There are examples to read and questions to ask about how and why we share fake news content with friends and acquaintances.

Chapter 3

is a call to action, to get involved in the fight against “fake news”! Best ways to tackle fake news are to raise awareness about the problems and consequences they cause, to share and discuss fake news content with others, and to adapt our ways of thinking and behaving in order to reduce the potential harm they cause.

Chapter 2

links information about adolescents’ experiences of “fake news” and problems they may have faced with additional contextual information (maps, data, infographics). It aims to provide a broader perspective and draft possible explanations to the emergence of “fake news” and adolescents’ reactions to them. There are three sets of information: examples of “fake news”, infographic comparisons between countries and thematic maps.



CHATBOT TALOS

What is it?

Talos is a chatbot with a joyful personality and insatiable curiosity. Its mission is to give information and discuss topics that are cluttered by disinformation, without judgement.

Who is it for?

Accessible from 12 year-old onward, Talos can also be used as an ice-breaker to adults (parents, professional or volunteering educators, teachers) who struggle to talk with young people in their entourage about sensitive, complex topics that can generate passionate responses.



What is it for?

This interactive tool consists of a discussion between Talos and the user during which the former asks about the latter's needs and expectations. Depending on the answers the bot uses its enriched database to orient towards digital spaces, information desks and individual experts most able to inform or provide users with the appropriate support.

How does it work?

Talos is accessible online from the Boomerang official website using any browser and connected device (computer, smartphone, tablet). It is entirely free and anonymous. Personal data (age, gender, region) are only inquired for statistical purposes.

Talos aims to help users of all ages to understand that they are not alone when struggling with false information. This particular tool required 3 development stages, with their fair share of challenges too, in order to meet its objectives!

Step 1

Identifying the themes or topics most prevalent in false information spread

When having so many tools to develop, it is easy to scatter. We made sure the Boomerang project stayed coherent by exploiting the StoryMaps questionnaire results in the first stage of development. Project targets' -young people and adults in their entourage- direct contributions were used to identify the topics they are most preoccupied with because they feel a lot of falsehoods circulate about them. Following the Covid-19 pandemic, **Health** was omnipresent in the results, followed by the Environment, Politics, Immigration, Economics and Religions. Our team being short of experts on these domains, we did not seek to provide users with definitive knowledge. We instead used definitions drawn from the European and international literature, in order to ensure their reliability.

Step 2

Identifying resources and support providers

For each theme we have identified, Talos orients users towards online resources accessible in their own language. We have referenced non-profit organisations, groups and individual experts who share an expertise in fact checking, media literacy, disinformation prevention or providing support to young people and families. We relied on our own network of trusted contacts to add to the list! However, we also faced an important challenge: we found that it was not always possible to find local or national resources to redirect towards for each theme and for each country symmetrically. When such an answer could not be given, Talos redirects towards general or international references. Our list can be used as a foundation for a European network of actors working in the fields of media and digital literacy. But it requires careful updating, a task we cannot take on our own!

Step 3

Proceeding to the technical assemblage of the tool

Now is the time to build our chatbot! We chose a complex tree structure which allows users to select one answer to Talos' questions out of several propositions. Only a few require using a keyboard. However this has given beta testers the impression that the conversation is rigid. Another problem stems from the nature of the tool. Though it does not aim to replace human interactions but encourage them, Talos is an artificial intelligence and a heated debate is starting on AI, ethics and associated risks. Partners of the project are committed to keep themselves updated on these issues, so they can in turn, improve Talos.

PAREIDOLIA

What is it?

Pareidolia is a free-to-use database of pareidolia images, i.e. images of random objects (clouds, coffee stains) onto which our minds project familiar shapes (faces, animals).

Who is it for?

Pareidolia tool is designed for educators, students, teenagers and all people who are interested in the possible interpretations of images (photos, films, etc).

What is it for?

Pareidolia aims to support people in understanding how a photo or an image can lead to different interpretations depending on the different personal experiences and perceptions of our senses. There are as many readings and interpretations of the same image as there are people seeing it. This also means that it is easy to be deceived by deliberately manipulated photos, videos and other images.

How does it work?

During the creation process, hundreds of photos were used by the Boomerang's partners as examples of images, illusions or false interpretation. You can download the complete database of images from the official Boomerang website and use it as a didactic, educational game to play at school or at home. Players can send pictures to their friends and discuss interpretations, or look together for new pareidolia images to share and ask each other: "What do you see?"



PAREIDOLIA ('εἶδωλον' i.e. image and 'παρά', i.e. near in Greek) refers to a **cognitive distortion or bias** whereby we tend to perceive familiar objects in random shapes: a horse-shaped cloud or a face on a blackened piece of toasted bread. It can apply to both shapes and sounds (**visual** and **acoustic** pareidolia).

Whenever observing something for the first time, our brain automatically seeks to give it **meaning**. It uses known images to interpret the unfamiliar ones, and like a filter, efficiently process visual information. Our education, personal background, preferences, culture and beliefs all contribute to shape our expectations.

Although we could have picked any other biases, we chose to focus on pareidolia. Pareidolia is the most appropriate way to raise awareness on how illusions deeply affect our resilience against disinformation and belief in fake news. It is fun, fast, stimulating, easy-to-understand and easy-to-replicate. It also opens perspectives and connections with a variety of topics: cognitive bias and other perception-altering phenomena like apophenia, psychology, Communication and Information Studies, and Artificial Intelligence.

MOOC & BLENDED LEARNING

What is it?

The Boomerang MOOC is an online training package for Educators who wish to learn more about information disorders and associated phenomena. It comes with a set of Blended Learning tools such as quizzes for them to be able to in turn, teach young people in educational contexts.

Who is it for?

Mainly Educators who are looking for complementary information to their initial training. The content is presented in a simple and easy-to-understand way so it can also be accessible to parents worried about the impact of false information on their children's behaviour.



What is it for?

This MOOC is designed as a basic training course tackling the information disorder. Blended Learning adds another dimension by providing materials for Educators to use when discussing these issues with young people, in and outside of school.

How does it work?

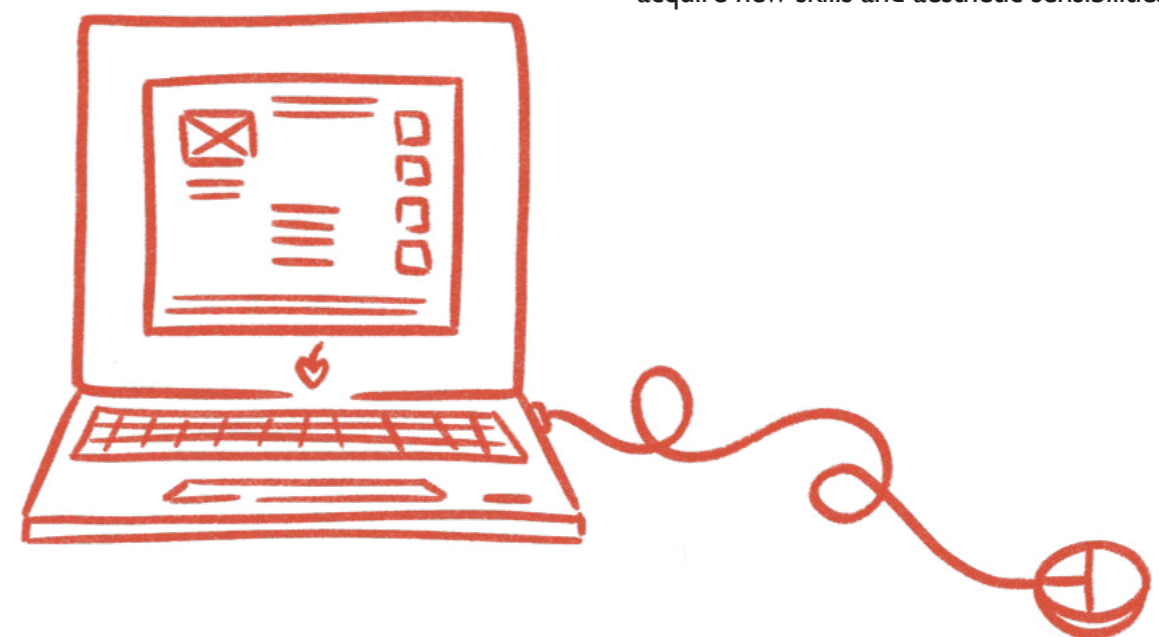
The Boomerang MOOC is accessible on the FunMOOC platform hosted by the University of Lille. Users have to create an account before accessing and completing (at their own pace) the 8 modules that make up the training. As for the Blended Learning toolbox, users can use the videos, quizzes and pedagogical resources as bonus content or to build their own courses.

On which aspects have we focused our work?

The MOOC development was a bumpy road! As Boomerang project partners, we found that it was a high-level creative exercise in which some of us had no prior experience. We worked hard to make sure that the design was attractive and the content synthetic enough to remain accessible. The most interesting and challenging part was the writing and filming of videos, as we were directly involved in their production as authors and actors! As for Blended Learning tools, we worked on selecting the most appropriate materials depending on the topic and emphasising users' experience quality.

Why was the MOOC & Blended Learning not a solo adventure?

Three essential resources were necessary to complete the MOOC. We first required the help and expertise of a professional with extensive experience in the production of MOOCs. We thus solicited **Politique Numérique** to both guide us through this process and add interesting artistic elements to the modules, making them more attractive and dynamic. The results were high quality videos fit for dissemination! We also needed a platform to host our MOOC and make it accessible online. We secured a spot on FunMOOC, an online training platform created and moderated by the University of Lille. Last but not least, we got other professionals involved through video interviews and other multimedia content to complement the training modules. The people we met through the MOOC production process have made this journey even more interesting, as it gave us the opportunity to acquire new skills and aesthetic sensibilities!



CONCLUSION

What have we learned?

From start to finish, we have been researching and gathering information about digital, media and information literacy. We learned a lot about these topics as research on false information is a real-time developing field of study. We were given access to recent, state-of-the-art publications that shed new light on a variety of concepts. For example, partners used to view “fake news” as a singular and unidimensional concept that could refer to any kind of false information. We are now able to grasp all the nuances and depth of complex phenomena such as mis-, mal- and disinformation. European projects such as Boomerang do not solely rely on pre-existing and absolute knowledge their creators may have. They are opportunities to learn, acquire knowledge and broaden perspectives. As we moved forward, our objectives and tools shifted in consequence.

Knowledge on these topics is indeed very complex and moving, so much so that we were unable to provide Boomerang users with answers and solutions for every single problem we have identified. We realised it would have been too difficult a task to try and build tools that simultaneously described the dangers of false information spread while presenting all the learning opportunities that arise from understanding and connecting together its many aspects and attached concepts.

The European transnational scope of the project brought many cross-cultural and cross-national insights. For one, we realised that although false information is prevalent in all four countries, the severity of their ultimate consequences differs in all of them. Partners from France reported dealing with a lot of violent radicalisation of youth due to a mixture of politics, historical factors and general attitudes towards false information. Radicalisation thus became a focus point of many discussions with little effort put into drafting a shared definition and understanding. This also led to conversations being extensively conducted in French. Overtime and as the project evolved, we were able to implement a more balanced approach in order to overcome language barriers and include everyone in the conversation.

Despite these issues inherent to international collaboration, we found it interesting to witness how partners from different countries deal with the same topics, organise their time, distribute tasks and communicate. Boomerang being an Erasmus+ project, we also were given the opportunity to travel during transnational meetings, visiting all four countries represented within the consortium.

As more scholars contribute to the field of digital, media and information studies, as technologies progress and new online platforms are created, the Boomerang project may require some updating and/or continuing. We are counting on more people and more organisations to come together from across Europe and the world to conduct projects for citizens’ empowerment. Family organisations at the inception of the project see Boomerang not as an end, but as the beginning of a movement others are going to take on and pursue.



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The Boomerang project would never have seen the light of day without the help and contributions of many people and organisations.

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GLOSSARY

Digital, media and information literacy

Oftentimes digital literacy is defined as a set of skills people can and should acquire in order to safely use digital and connected technologies as well as cope with disinformation. However this definition can only apply if we consider individuals to be passive internet users that do not engage in posting, sharing and discussing with others, which is not the case. The DigComp EU Framework has opened broader possibilities for digital literacy to be truly empowering by defining it as “the ability to access, manage, understand, integrate, communicate, evaluate, create and disseminate information safely and appropriately through digital technologies.” There are five key areas in which to develop competences (see Chart) the first one being media and information literacy understood as the ability to browse, search, filter, classify and critically assess information found online.

These are critical to become better critical thinkers, better communicators and better online citizens, defined as active contributors to digital spaces.



Disinformation

Drawing from the European Commission expert group’s Final report (...) on tackling disinformation and promoting digital literacy (...) from 2022, the two main ingredients to disinformation are falseness and intent to cause harm. It is defined as “verifiably false or misleading information that is created, presented and disseminated for economic gain or to intentionally deceive the public (...)”. Authors may use false connections, misappropriate journalistic style and visual codes, misuse other organisations’ logos, alter images with softwares or artificial intelligence for the purpose of appearing legitimate and credible as sources of information. However when internet or social media users share disinformation content, they might do so because they genuinely believe the information to be true.

This is called misinformation: when “verifiably false information (...) is spread without the intention to mislead”. Finally, malinformation happens factually correct information is used to cause harm.

Examples

- **Disinformation** In 2016, a rumour spread that Pope Francis had endorsed presidential candidate Donald Trump in the United States of America elections.
- **Misinformation** A concerned grand-parent floods the family online conversation with anti-vaccines content in hopes to prevent autistic disorders in their grand-children.
- **Malinformation** A Daily Beast article gave enough details to link 2016 olympic athletes to LGBTQ+ dating apps, with little regards to if they would face discrimination or anti-gay laws in their country.

BIBLIO- GRAPHY

Conspiracy theories¹

Conspiracy theories are often perceived as delusional or paranoid attempts to look for culprits and ultimate causes to significant, tragic events. Only, conspiracies do exist! (See Example 1) They are real-life secret schemes a group orchestrates to overstep laws, regulations and institutions and gain financial or political power. But until co-conspirators are exposed and judged, they are just theories! We thus need to distinguish between conspiracy theories and conspiracy beliefs. The latter refer to a person's tendency to prefer a conspiracy explanation to an event (a lost election, a natural disaster, another person's death, etc), stemming from their need to find meaning or from their bias towards specific groups, like antisemitic prejudice. Belief in one conspiracy theory has been shown to increase the risk of believing in more, even ones that contradict each other.

Example

In 2006, major American tobacco companies were found guilty under the Racketeer Influenced and Corrupt Organization (RICO) Act of having deceived the public about the addictiveness and dangers of cigarette smoking.²

Pseudosciences

We call pseudoscientific a theory or reasoning that appears to be scientific while not abiding by principles and normal procedures of science. Scientists indeed specialise in one area of expertise and form communities (geographers, physicists, sociologists, mathematicians, etc). They proceed to read and review their peers' work to increase their own knowledge on a specific topic, and make sure their peers' scientific statements are realistic, well argued and open to discussion. On the other hand, pseudosciences tend to be inaccessible to any kind of critical evaluation. They often rely on sensational, exaggerated and absolute claims, which they disguise as reliable science by misappropriating a scholarly style or academic titles, making references to "traditional", "foreign" or "exotic" practices and manipulating study results and figures.

Example

A PhD doctor in Sociology voluntarily omits to mention their specialty and to clarify their area of expertise while discussing sophisticated medical aspects of vaccine inoculation.

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Websites

[EU DisinfoLab](#)
[Eurostat](#)
[First Draft News](#)
[Open Your Eyes](#)



1. *Identifying conspiracy theories* - European Commission
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An innovative and interdisciplinary initiative, the Erasmus+ Boomerang project is fourteen experts' from five partnered organisations and four European countries contribution to the global fight against mis - and disinformation. It is a pedagogical toolbox created for the extended education community, from parents to professionals and volunteers working with teenagers and young adults outside of school, so that they can more confidently face situations of misunderstanding or conflict linked with exposure to false information. Through this guide, we wanted to give fellow European project conceptors a quick dive into Boomerang's backstage in order to help you identify the challenges (and possible solutions to overcome them) inherent to any multilingual, interdisciplinary work on media and digital literacy.



Welcome to the **BOOMERANG** Guide