The education system, the way to fight fake news

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Abstract

To form broad and sound opinions on various issues, we must be able to access a large amount of information, including online. However, given the increasing prevalence of fake news and disinformation, the information received must be reliable and verifiable. Recognizing questionable or malicious content can be very challenging in today's interconnected world, especially for youngsters. For these reasons, sociologists and teaching staff have voiced the need for policymakers to combat the spread of this phenomenon among youngsters and so, they came together in testing and, later on, in gradually introducing, in the education system, lectures the phenomenon of fake news and disinformation. Lectures increasingly incorporate debunking and digital literacy and are mostly focused on raising awareness of the dangers generated by fake news and disinformation among pupils and students and on learning various techniques for identifying and thus stopping the spread of this type of malicious information. The present article maps the real and potential impact of fake news and disinformation among pupils and students and their healthy mental and social evolution. Therefore, it highlights some recommendations meant to prevent the spread of this phenomenon from the early stages of the individual's evolution, respectively starting in the classroom. The key message of the article could be considered that education is an effective weapon to combat fake news and disinformation.

Keywords: new trends, information sabotage, misinformation, disinformation, digital literacy.

1. Introduction

False information, also known as rumor, deceit, distraction, and propaganda, has been a persistent issue since the inception of news. Technological advancements and the widespread reach of mass communication platforms have led to the widespread dissemination of misinformation. The emergence of digital 'fake news' presents a significant threat due to its increased accessibility for creation, dissemination, and consumption, extending beyond traditional print media to digital channels.

The advent of digital communications technologies has facilitated the extensive creation, dissemination, and consumption of fabricated news and disinformation, hence posing challenges in discerning between genuine and deceptive information.

1.1. Fake news - features and challenges

Social networks provide a conducive setting for the widespread creation and distribution of false information. Two possible reasons for this phenomenon are the rapid dissemination of content and the emergence of specialized areas of thinking.

Social media platforms such as Facebook, Instagram or Twitter are frequently mentioned as enabling the dissemination of false information, highlighting its swift propagation and possible harm [1]. Entities involved in creating of false information encompass corporations, government entities, and people, each driven by various motives to spread

such content. For instance, the impact of false information on voters during election campaigns, such as the 2018 Brazilian elections, the 2019 Romanian elections, or the UK's BREXIT referendum, which led to the country's departure from the European Union and not last, in the field of public health - by disseminating false information about the effectiveness and probable risks of anti-Covid vaccines.

Regrettably, and quite concerning, both informed and uninformed audience members are frequently subjected to misleading material, such as fake news and disinformation. This can doubt the beliefs and choices of consumers of such content, including scholars and students.

1.2. The impact of fake news among teenagers
While acknowledging the significance of the issue of false news, both students and teachers find that the current education system cannot effectively address this problem. This is mostly due to the heavy workload on teachers and a lack of professional assistance and experience. School leaders, instructors, and education professionals are inadequately equipped to handle the issue of fake news in schools. According to studies, the majority of teachers believe that secondary school children are exposed to fake news to a greater extent than adults and the impact goes much behind a greater extent. Therefore, their skills, in identifying fake news (e.g.: critical thinking, media literacy or the ability to analyze sources) should be strengthened and developed to increase their immunity to fake news.

The exposure of primary, secondary and high-school students to fake news presents new challenges for the education system, which is deeper and more serious than many might think.

Teenagers are overwhelmed with information from diverse channels, including educators, relatives, peers, advertisements, television shows, and the Internet. This material may possess varied levels of accuracy, objectivity, and ethical legitimacy, but it can also be highly erroneous and biased.

A poll conducted at Stanford University revealed that young individuals exhibit more susceptibility to misinformation, making them more susceptible to manipulation through the dissemination of fake news, paid content, and biased "expert opinions", often without their awareness.

1.3. The early fight against fake news at the high school education system level
Education is crucial in shaping the future and represents our intentions for the preparation of future generations. The type of education we currently possess will greatly influence the future we will experience.

The primary objective of the educational system is to provide young individuals with the necessary skills and knowledge to actively participate in society and take on responsibilities with a sense of commitment. In the absence of this, intricate and diverse cultures that are rapidly progressing cannot endure.

Students must cultivate a robust sense of skepticism in order to discern falsehoods and proficiently leverage internet information in a multifaceted society. The primary objective is to cultivate a populace proficient in reading, enabling them to comprehend information efficiently within the transformed informative environment, hence impeding the swift dissemination of falsehoods and guaranteeing protection.

A best practice example is Finland, Europe's most resilient nation against fake news, as can be seen in the figure below, which is actively addressing the global challenge of false information including by incorporating it into the curriculum of primary schools, as part of a broader national strategy.

In this regard, unfortunately, Romania is among the European states with a very low rate of media literacy, occupying the penultimate place before Bulgaria, according to The European Media Literacy Index 2023 [2] - an instrument for assessing and ranking societies in their potential for resilience in the face of "fake news" phenomena.
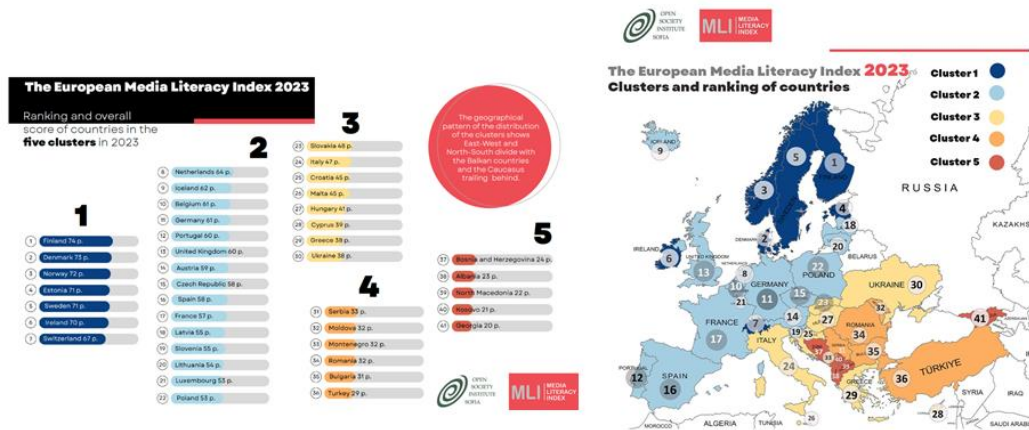

Fig. 1. The European media Literacy Index 2023 [2]
Source: Marin Lessenski, Media Literacy Index 2023 report entitled: Bye, Bye Birdie: The Challenges of Disinformation, 2024

According to The Media Literacy Index 2023, the top-performing countries in terms of media literacy in the first cluster are primarily in Northern and Western Europe, including Scandinavian nations, Estonia, and Ireland (Fig. 1).

The second cluster covers Western and Central Europe, while the third includes Southern and Central Europe, including Ukraine and Greece.

The fourth cluster includes Romania, Serbia, Bulgaria, Turkey, and Moldova. So, the 2023 statistics indicate a notable disparity in media literacy, with the Balkan countries and Caucasus region lagging. These countries are close to the Russia-led conflict in Ukraine and are more vulnerable to malicious disinformation. The Balkan countries, which continue to experience internal instability and tensions between states, are ranked among the countries with the highest risk in the index.

Thus, after comprehensive research on the topic, we strongly believe that the early fight against fake news starts from still high school. Therefore, there is a need for an educational system that aims to train individuals to recognize false information. Furthermore, we identified the necessity for a "pre-regulation education" strategy towards addressing the challenges of fake news.

According to our research, potential educational approaches to combat fake news include media literacy, news literacy, and information literacy [3]. Generally, these literacies seek to enhance an individual's interaction with the media by imparting information that can encourage responsible consumption of various media.

2. Tools used in fighting fake news
2.1. Media literacy
Experts from diverse disciplines are collaborating to counteract the dissemination of false information by integrating fact verification into the practice of journalism. This technique evaluates the truthfulness of news or statements made by public personalities on the internet. Media literacy is a multidisciplinary field that centers on educating people about the role of media in society. It entails developing an independent connection with various forms of media, analyzing them thoughtfully, and recognizing that content is created within a particular framework. News literacy is a specialized form of media literacy that focuses specifically on journalistic media [4]. Information literacy highlights the fact that information can be examined from multiple perspectives, resulting in diverse interpretations and conclusions. This strategy facilitates the development of an independent mindset towards the media and its impact on society.

Literacy skills are intricately linked to the Common National Curriculum Base, which governs the curricula in both public and private schools in Brazil. The curriculum places a strong emphasis on cultivating critical thinking skills grounded on factual information, as well as the significance of pupils analyzing material from many sources, with a special focus on internet-based resources. Engaging in literacy practice entails employing lateral reading, which means expanding the reading process beyond relying solely on information from a single source. This method facilitates the identification of significant metadata, such as the individual accountable for the publishing and editorial preferences, and it also allows for the comparison of the source with other media platforms. This strategy differs from vertical reading, which exclusively concentrates on the original text and takes into account visual elements. Lateral reading entails the assessment of material obtained from the primary website, completing further research, and comparing the source with other sources to evaluate the credibility and any biases. This strategy enables inquiries regarding the veracity of material on professional websites and the dependability of sources.

2.2. The "Mapping" method
Determinig who is behind the news
- Research on the author of the news: By emphasizing this information, the user will be motivated to verify if the individual responsible for the writing is an established expert in the field of journalism and, subsequently, to explore the professional's potential personal inclinations.

- Research to determine the entity responsible for the domain hosting the news. If possible, utilize the information about the individual or legal entity to assess the trustworthiness and potential ideological biases of the news outlet.
- Conducting a Wikipedia search to gather information about the website where the news is published: While Wikipedia is often seen as an untrustworthy source, particularly for academic research, it can be used as an initial reference for verifying facts, especially when seeking information on the source of news articles.

Evidence checking for the news content
- Fact-Checking Websites

The Google Search API (Googio) enables unrestricted searches on Google's search engines, delivering links, descriptions, and websites. Users can personalize parameters such as language, country, and geographic region. The API additionally provides access to searches utilizing Google Images, Google News, and Google Scholar.

Fact Check Explorer is a tool developed by Google that assists journalists and researchers in analyzing news articles that have been verified by fact-checking websites. It offers the latest findings released by various websites, enabling users to assess the accuracy of a specific topic. The sample space of Fact Check Explorer encompasses Fact Check Agencies that adhere to Google's requirements, which encompass data layout, correction processes, and transparency regarding sources and techniques.

Two notable fact-checking websites are AFP fact-checking (https://factcheck.afp.com/), which is managed by the international media organization France-Presse Agency, and Reuters Fact Check (https://www.reuters.com/fact-check/), which is maintained by the multinational media firm Reuters.

- Publication date

The phenomenon of old, out-of-context articles being disseminated on social networks to spread disinformation is widespread [5]. Furthermore, negligent users frequently fail to allocate sufficient attention to these dates. Hence, in certain instances, highlighting the publication date is enough to demonstrate the utilization of outdated material for misinformation intentions.

- Checking behind the website

It is essential to verify the individual or legal body who registered the website where the news is hosted. When a domain name is acquired from a specific provider, the purchaser's information is transmitted to ICANN (Internet Corporation for Assigned Names and Numbers), a non-profit organization that oversees the DNS protocol (Domain Name System) and other related tasks.

ICANN manages the WHOIS system, which allows public access to certain data on these names. For instance, website.informer.com offers a concise and comprehensive overview of various information available on the internet regarding a specific website or domain. This includes details such as the number of daily visitors, safety status, Alexa rank, owners, and other relevant data.

2.3. Recommendations for different types of fake news education initiatives

Many government and educational institutions worldwide are confronted with the task of incorporating supplementary curriculum content into existing curricula as a tool to address the issue of false news. The process is complex and time-consuming, but worth implementing we consider. Students must develop the ability to critically evaluate information and effectively utilize online resources to thrive in an ever more intricate society.

Summarizing what we mentioned earlier in this paper, we recommend that those involved in developing and implementing education policies keep in mind the purpose of pedagogical working with different stage students, namely to provide them with the necessary information in the field of fake news identification and in the same time assist them in addressing three primary inquiries: "who is responsible for the news?", „what evidence supports the statements?" and "What have other public open sources have to say about the same news/topic".

As stated previously in this paper, more advanced European countries in terms of media literacy have targeted programs included in the curricula for the first two years of elementary school, where students get involved in various literacy practices, such as lateral reading, a technique which enhances individuals' ability to critically analyze material they come across on the internet.

Some potential educational projects to consider implementing in the elementary, secondary, and high school system include: Collaborating with colleagues and professionals in the sector to exchange experiences; offering educators easily available materials for immediate use in their teaching; developing educational materials for kids in elementary, middle, and high school that focus on the subject of disinformation and ensuring that they are easily accessible; offering easily accessible and highly effective methods, facilitating cooperative endeavors focused on countering misinformation and associated concerns, etc.

Fighting against fake news equals fighting inoculation and students should learn to develop a critical way of thinking to build active resistance, capable of protecting them against disinformation.

The initiatives vary among various educational [6] and cultural systems, but they mainly refer to some constants: courses combined with applied learning on media literacy and technological/digital tools, optional lectures based on gamification, and diverse educational practices.

More specific policy recommendations, as advised by pedagogical experts, envisage:

- Incorporating media literacy and fake news education into the curriculum during early childhood. Although there are individual efforts, they are typically limited in scope and only impact a small number of kids. Schools should form collaborative alliances with other entities and specialists to cultivate novel strategies and proficiencies in combating misinformation. Education leaders and institutional leaders should promote collaboration with these external actors to develop a comprehensive strategy for combating misinformation.

- To guarantee comprehensive intervention across the entire system, teachers must undergo extensive training on the subject of false news. This training should include the integration of essential skills into existing training programmes, in collaboration with non-governmental organizations (NGOs) and experts. Enhancing teachers' capabilities and alleviating their workload is of utmost importance. The curriculum reform should prioritize the cultivation of practical life skills and the development of social competencies necessary for active engagement in social and public spheres. These competencies include fostering a culture of discussion, empathy, media literacy, resilience against misinformation, and critical thinking. This initiative aims to enhance teachers' social competencies, hence fostering a more inclusive education system.

- Developing age-appropriate educational resources for different areas, such as media studies, business, lifestyle, history, citizenship knowledge, and foreign language schools, to tackle fake news and misinformation. Teachers should be provided with readily available resources such as pre-made materials, worksheets, tools, toolsets, and class plans. Utilizing interactive techniques, such as employing analogous programmes in different subjects, can aid in the cultivation of skills about counterfeit information. Creating a platform for the exchange of experiences and sharing of teaching resources on the topic of false news could serve as an engaging and beneficial tool.

- Classroom sessions should prioritize discussing subjects that captivate pupils, such as misinformation about individuals, actions, or influential figures [7]. This activity aids in the cultivation of aptitudes for discerning and validating misinformation. Enhancing students' abilities, such as their engagement with current affairs, analytical reasoning, understanding of media, capacity for empathy, teamwork, communication skills, and fostering a culture of discussion, can bolster their resistance to misinformation, heighten their recognition of potential dangers, and encourage their active participation in the community.

- Successful media instruction necessitates strong cooperation between families and schools. Parents need to participate in training programmes that specifically target their cognitive abilities and talents. Programmes should foster collaboration among parents, teachers, and students, while also offering support to both homeroom and subject-matter teachers.

3. Conclusion

In a society filled with multifaceted challenges, false information, including rumor, deceit, distraction, and propaganda, has become a significant issue due to technological advancements and mass communication platforms. Digital 'fake news' presents a threat due

to its accessibility and rapid dissemination. Social networks, corporations, government entities, and individuals contribute to the spread of misleading content, posing challenges for informed and uninformed audiences. Fake news affects teenagers, but also the education system struggles to address it due to big workloads and lack of professional assistance. Secondary school children are exposed to more fake news than adults, requiring the strengthening of critical thinking and media literacy skills. The early fight against fake news [7] should start at the pre-university education system level. Education is crucial for shaping the future and preparing future generations. It aims to provide young individuals with skills to participate in society and take on responsibilities. Finland is a resilient nation against fake news, incorporating it into primary school curriculums. However, Romania has a low media literacy rate, with Balkan countries and Caucasus regions lagging.

Research suggests pre-university education is crucial in combating fake news, with potential approaches including media literacy, news literacy, and information literacy aimed at promoting responsible media consumption. Responsible authorities in the field and educational institutions must incorporate supplementary curriculum content to address false news, which enables the young generation to develop critical evaluation skills and utilize online resources to thrive in complex societies. Some of the tools we have recommended in identifying fake news at the level of primary school, secondary school, and high school level, include media literacy and mapping, which refers to checking who is behind the news and checking the evidence for the news. Furthermore, potential educational projects include collaborations, accessible materials, and cooperative efforts to counter disinformation. Initiatives include courses, gamification, and diverse practices.

It is recommended the examination of successful methods of other states that have already implemented similar measures, yielding excellent outcomes. These practices should be tailored to the Romanian education system and the unique issues faced by the new generation in the current context of social-economic and political.

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