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A human-centric approach to countering disinformation: Fostering epistemic agency via collaborative partnerships and digital source verification interventions

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Abstract

Throughout all European countries, disinformation, the prevalence of false narratives and the rise of online radicalism are recognized as profound instances of “dysfunctional communication” driving contemporary societies toward populist polarization and conflict. As traditional guardians of knowledge authority and epistemic commons, the news media takes a bold stance in combatting disinformation, even though the profession is facing significant challenges in terms of business and trust production. How should journalism education respond to the increasing epistemic uncertainties and develop the essential skills and capacities for digital information verification, while fostering the commitment for ethical communication and serving the public good? This paper discusses the development and teaching of contemporary journalistic professionalism as a social process sustained via different digital mediums and contextualized within real-world events. Using the example of the pilot study, it suggests that within contemporary journalism education, there is a growing requirement to cultivate a collaborative ethos among journalists and sources, starting within the university setting. The experience gained from the source verification class, tested with Lithuanian journalism students in a collaborative learning situation, reveals fact-checking practices that anticipate the development of epistemic capacities and self-efficacy, crucial for resilient journalistic professionalism.

Key-words: disinformation; epistemic agency; collaborative partnerships; digital source verification

Introduction And Background

In just a couple of decades of intense digitalization, newly evolving digital information infrastructures, particularly global platforms known as Tech Giants or GAFAM¹, with their internal capitalist model and algorithmic data governance systems, have revolutionized the way people comprehend media, access online information, communicate, and form opinions regarding what is true and what is false. The latter implication, namely the uncertainty surrounding the credibility of content, is one of the most recent developments in Platform

¹ Big Tech refers to the five largest American companies such as Google (Alphabet), Amazon, Facebook (Meta), Apple, Microsoft. These companies are referred as the Big Five or GAFAM.

Society (van Dijck et al., 2019), challenging established ways of organizing social and democratic life.

Manipulations of online information and the rise of “dysfunctional communication” practices, broadly characterized as “information disruptions” (Wardle & Derakshan, 2017), essentially point to the escalating circulation of online disinformation, artificial facts, hate speech, radicalization, and various other forms of malicious content. By identifying different actors engaged in the creation, dissemination, and reception of online news of questionable quality, the term of “inforuptions” is also fitting for encapsulating changes in the professional news media environment (Monsees, 2021). As traditional guardians of knowledge authority and epistemic commons, the news media takes a bold stance in combatting disinformation, even though the profession is facing significant challenges in terms of business and trust production. Though factchecking is highly valued as an evolving journalistic genre, on the side of the publics the question remains whether it is sufficient to form a world view based solely on pure facts and debunked information. In other words, is fact-checked information provision all that contemporary audiences need to be better informed? Indeed, various forms of online information disruptions do not only confuse. Disinformation systematically impacts the democratic value of deliberation (McKay & Tenove, 2021). For digitally misled and uninformed publics, manipulations can be especially harmful as they operate with strategic aims to challenge both cognitively and emotionally, deceive, and instigate feelings of helplessness. The distorted facts and unsettling emotions of increasing suspicion, disbelief and distrust further inflict significant harm on the maintenance and sustainability of respectful and dialogic communication. Recent and enduring crises, such as environmental challenges, the Coronavirus outbreak, and Russia’s invasion of Ukraine, have intensified information exchanges, resulting in fundamental shifts toward increasingly digital, mobile, and platform-dominated transmedia communications. Likewise, the rising uncertainty and the escalating demand for definitive answers on the part of the publics have resulted in significant surge across various media sources, including social media sources like blogs, as well as unmoderated platforms such as “Telegram”. The “transmedial” information environment, as outlined by Jenkins (2003) and further examined by Hancox & Klæbe (2017) and Chadwick (2013) as well as other authors, specifically one shaped by convergent and hybrid media and mixed discourses of uncertain value, exemplifies misleading “informational noise”, which obstructs the communication of accurate information and makes it even more difficult for people to navigate in the information space. Essentially, the term “transmediality” signifies the increasing interconnectedness and limitless circulation of media content across diverse

platforms, where individuals formerly labeled as “the audience” are increasingly engaged in generating and managing these streams. Hence, to be reasonably informed, individuals must pay attention, navigate, analyze, and comprehend information and news collected from various media formats and authors. They also must develop individual judgments regarding news selections and their dynamics (Jenkins, 2006). According to the Digital News Report 2023 by Reuters (Newman et al., 2023), across various media markets, a significant majority (56%) of individuals express concern about their ability to distinguish between truthful and false online news. Those who primarily rely on social media for news show increased worry (64%) compared to those who abstain from its use entirely (50%).² Furthermore, within these individuals, trust is not only lacking in government institutions, but also in journalism and news. For numerous years, people have relied on such institutions to be provided with facts and sources that they could use to make informed decisions. However, within a few years of digital transformations, things have changed dramatically. Therefore, a pertinent question arises: How do different groups perceive journalism, news media, and their roles in addressing disruptions to information? In democratic societies, trust is an essential component of how people evaluate the quality of government institutions and how they associate with them. Low trust in government institutions does not necessarily indicate symptoms of authoritarian regime, it is heavily impacted by the fact that people in democratic societies are more open to share their opinion on their country’s institutions. According to the OECD (Organization for Economic Co-operation and Development) analysis of 2021, which is based on a survey of 50,000 people from 22 OECD countries, trust and distrust are split evenly. According to the poll, 41.4% of respondents across countries trust their national government, while 41.1% do not.³ Another report by Eurofound, which has covered the period of 2021-2022 and surveyed over 200,000 people across the EU, revealed that trust in institutions overall has declined by an average of 13.4%. The sharpest decrease in trust was in national governments (-24.5%), followed by trust in health systems (-10.2%) and the police (- 8.1%), which was heavily impacted by the Covid-19 pandemic and more recently Russia’s invasion of Ukraine.⁴ The trust in news and journalism has been no exception to these numbers. As Reuters Digital News Report 2023 (Newman et

² Reuters Institute “Overview and key findings of the 2023 Digital News Report” Available at: <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2023/dnr-executive-summary> (Accessed: 10 August 2023).

³ OECD “Governments seen as reliable post-pandemic but giving citizens greater voice is critical to strengthening trust” Available at: <https://www.oecd.org/newsroom/governments-seen-as-reliable-post-pandemic-but-giving-citizens-greater-voice-is-critical-to-strengthening-trust.htm> (Accessed: 11 August 2023).

⁴ Eurofound “Fifth round of the Living, working and COVID-19 e-survey: Living in a new era of uncertainty” Available at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef22042en.pdf (Accessed: 10 August 2023).

al., 2023) also concludes that trust in the news has fallen by 2% in the last year, where four in ten people of the total sample (40%) say they trust most news most of the time. Broadly speaking, any period of social transformations is emblematic not only in the changed social routines and communication practices. A transformative period adds a heightened emotional charge to public responses and perceptions (Piko, 2002). The latest wave of transformative events, first the health-related crisis and then the geo-political challenges arising from Russia's invasion and war in Ukraine, have sparked massive influx of and accessibility to false information. When viewed from a media and communications perspective, situations characterized by increased uncertainty and emotional vulnerability, both due to real and perceived threats, require a specific approach for analysing individual and group reactions. Specifically, such moments require heightened mobilization on the part of all professionals, including government spokespeople, science experts and situation analysts, to deliver timely and reliable information. During such critical moments, the significance of traditional news media and journalism, combined with the public's increasing awareness of various forms of dysfunctional content (such as false and populist claims, radicalism and hate speech), becomes pivotal in enhancing self-protection and nurturing resilience against numerous information disruptions (Boulliane et al., 2022). How do individuals perceive their own responsibility in becoming well-informed and proficient consumers of online information, equipped with the necessary epistemic tools? We will explore these issues by examining the broad aspects of human agency and self-efficacy and how these categories are acquiring an exceptional significance within the framework of rapidly advancing platform-driven transmedia communications and already noted disruptions in online information. While this paper will take a comprehensive "human-centered" approach to information processing, its focus will be on the evolving role of journalism and the agentive features required for responsible information verification and content production. As previous studies inform, disinformation and misinformation often originate from local contexts, with social inequalities and enduring social conflicts frequently serving as persistent drivers behind manipulations and conspiracies (Bennet & Livingston 2018; Kreiss, 2021). Therefore, our discussion will provide insights into the experiences from the Baltic Sea region, with Lithuania serving as a focal point to analysing "societal resilience", risk perceptions and public preparedness in the face of a dysfunctional information environment (DIGIRES, 2022). The primary theme of our discussion will revolve around the importance of epistemic agency and capacities (see, for example, Hendrickx, 2022) required to effectively manage online information by both media professionals and users. To set the framework for analysis, several additional concepts, including those of vulnerability,

resilience, and promotion of collaborations and shareholderism towards the building of trust, will be introduced. Finally, a brief example of the multi-level pilot study will be provided to illustrate some of the concepts and share experiences gained from the digital source verification learning that was applied in a university setting to test media literacy interventions aimed at journalism students.

Theoretical framework: Human-centric strategies for combating disinformation

“Online disinformation” is a nuanced concept, and when planning policy solutions, it necessitates considering a multitude of factors in order to formulate a variety of responses to combat it. Very often, the key considerations involve transitioning from responsive and reactionary approach to more proactive one, emphasizing initiatives aimed at raising the level of “risk awareness” among citizens (Stanton et al., 2006), especially through different educational trainings and interventions (Bleyer-Simon et al., 2022). As anticipated, these actions would foster the democratic capacities of the public and enhance the resilience to digital information disruptions. While educational programs aimed at critical thinking yield desirable results, it is crucial to acknowledge that the act of “information processing” encompasses both cognitive and social dimensions, necessitating the presence of trust (Harambam, 2021). Therefore, beyond mere educational practices about the harmful nature of disinformation, another issue of heightened significance that needs to be addressed is the aspect of “social connectedness” and knowledge “shareability”, which persists in contemporary social media communications owing to their digital interactive nature and transmedial logic. To elaborate further, online disinformation needs to be defined as a highly abstract phenomenon, often characterized as a “wicked problem” (Montgomery, 2020). Wicked problems comprise a myriad of socioculturally structured features, which present difficulties in analysis. Therefore, addressing online disinformation necessitates heightened sensitivity to persistent vulnerabilities and susceptibility, focusing on aspects of human responsiveness. Likewise, drafting policies to address wicked problems requires a holistic understanding of the entire context, which in the case of online disinformation, is determined by the specificities of the national information ecosystem on one hand (Obrist et al., 2010; Humprecht et al., 2021; Balčytienė & Horowitz, 2023a) and the diverse set of stakeholders seeking their own solutions on the other. While media educators, librarians, and journalists may all be focused on

developing effective responses to disinformation, each of these actors has their own specific approaches to meeting the needs of citizens. This leads to the observation that addressing online disinformation cannot rely on a single definitive approach to achieve a successful solution.

In most policy making efforts addressing information disruptions, the focus is on fostering “societal resilience” as a desirable outcome, around which all solutions aimed at the mitigating of disinformation should revolve (Apostol et al., 2022; Golob et al., 2021). On the other hand, societal resilience itself is an ambiguous social state that lacks a clear-cut definition (Cooper et al., 2022; Garrand, 2022). Therefore, all social responses to online disinformation, including susceptibility to manipulations and related vulnerabilities, should be regarded and treated as “symptoms” of some deeper societal conflicts, unresolved problems, and impulsive reactions to change and its associated consequences. With this perspective in mind, we argue that national country response to the influx of online disinformation should be examined not only through structural measures (assessing the quantity and types of disinformation), but as a “socio-political phenomenon” (Lewandowsky et al., 2017). It is a social and dynamic process necessitating “human-centric” and sensitive exploration (Balčytienė & Horowitz, 2023b). Within this framework, a concept that needs to be revisited here is that of human or individual “agency”. In socio-psychological literature, agency is characterized as the ability of people to regulate and control their cognition, motivation and behavior, influenced by existing self-beliefs, particularly self-efficacy (Bandura, 2006). Defined as socio-constructivist view, the approach also suggests that while regulating personal processes is an individual pursuit, achieving effective goal-directed operation requires support of others and cultural elements within sociocultural environment, such as traditions or values. Bandura’s theory of Human Agency (Bandura 2006) specifically draws attention to the ability of people to independently control their thoughts and actions, hence individual agency is closely related to the concept of individual autonomy and also civics. Particularly the latter aspect – civic engagement – is crucial to democratic action and involves the ability to choose, plan, and act upon one’s own will (Buckingham, 2017; Hendrickx, 2022; Dahlgren, 2013). Hence, in the context of informed opinion formation and citizenship education, individual agency must be viewed as not solely connected to ways of knowing and doing, namely epistemic capacities, but as also intertwined with feelings, emotions, and intentions – all of which collectively contribute to the cultivation of social trust among those engaged in communication (Booker, 2021; Dahlgren, 2006, 2018). All in all, one significant take away from this theory is that agency arises within social structures and contexts, and once emergent may exert influence capable of altering these social and

cultural contexts, and structures (Code, 2010). Considering all these aspects, individual agency needs to be studied as a central dimension within another phenomenon: resilience (Schwarzer & Warner, 2013). This leads us to assume that the analysis of the development of societal resilience in transmedially sustained communication environments should focus on the people's capacity for utilizing online information to build awareness and responsive action. In this regard, it is crucial to recognize that this process entails not only the accessing and sharing online, including experiences and facts, but also sharing epistemic formations, such as self-efficacy, which is the belief in one's ability to perform actions within these practices. In essence, self-efficacy is not a trait or generalized response. It is very specific to a given behavior. In transmedial environments, self-efficacy beliefs, by activating affective, motivational, and behavioral mechanisms, can promote resilience. In contemporary analyses and promotion of professional journalistic performance, it is of crucial importance to understand how this form of professionalism, specifically the epistemic tradition of truthfulness and accountability, becomes institutionalized and is sustained, particularly in the context of changing professional culture.

Journalism and democratic capacities: a reciprocal connection

While contemporary media environments rapidly transform towards greater inclusiveness and transmediality, as a classical notion, the idea of informed citizens with "democratic capacities" remains a valid standard for policy making (Hoggan-Kloubert et al., 2023; Grabe & Myrick, 2016; Christians & Nordenstreng 2004). In line with classical notions of media civics, the essence of democratic decision-making is reflected in the qualities of journalistic professionalism, which are marked by a strong emphasis on factual accuracy and public accountability (Peters & Broersma, 2012). These principles collectively constitute the core of the epistemic commons. Likewise, for citizens to form their opinions, they require access to information and knowledge; however, in the context of increased uncertainty and transmediality, this information may not always be ethically sourced and provided by professional journalists or the people with good intentions (Hoggan-Kloubert et al, 2023). Quite similarly, the classic vision of the democratic way of life obliges citizens to act responsibly. Media responds to public needs, exemplifying its mission to listen and serve the political requirements of the public. On the other side of this social contract, citizens are expected to fully engage and exercise their rights to freedom of expression and information, committing themselves to act and make informed choices when, for example, voting in political elections. Continuing along this line of thinking, discussions about societal resilience in a transmedial

setting must place a stronger focus on the democratic epistemic capacity of the entire society, involving all citizens. This is imperative for efficiently addressing potential information threats and implementing suitable measures to mitigate harm. In this context, the concept of agency carries a weight of paramount significance. While using media and becoming informed on an issue, the human agency is activated and encompasses both the required capabilities, such as skills and thinking, and self-efficacy. The latter dimension is an intentional power to believe in one's capacity to manage informed decision-making based on the available information (see, for example, Bandura, 2006). For instance, when dealing with online disinformation, accessing and then evaluating it is a cognitive as well as motivational and emotional process that involves the application of digital skills and verifying, judging, and making decisions based on emotional and attitudinal responses and perceptions of received information (Paciello et al., 2023). Individual capabilities, such as digital skills and critical thinking, are of paramount importance to discern manipulations and choose informed judgements. Furthermore, one should not forget that the acquisition of information is a social process that necessitates individuals to engage and interact with other media users and sources to shape their worldview (Harambam, 2021). As recognized in previous studies (Putnam, 2001), well-informed decision-making strongly relies on and is shaped by the existence of "social capital" and group support, which signals the potential for greater social integration and cohesion. Genuinely involved with socially-shared information is crucial in nurturing trust and fostering feelings of security. All in all, these qualities are essential for building self-regulatory capacities and fostering individual resilience. However, when dealing with uncertain situations and disruptive information, such as online disinformation and misinformation, self-efficacy alone cannot be a good guide in informed decision-making. Studies suggest that deceptive discourses filled with fabricated narratives often mimic professional decision-making patterns found in news journalism, such as presenting facts, data, quotes, and similar elements to establish authority in the text. This brings our attention to the question of strengthening of the "journalistic agency" and its epistemic mission in both combatting online disinformation and building trust in a transmedial environment. Can the restoration of trust in journalism be achieved by strategically investing into the preservation of traditional journalistic practices, which involve providing verified information in a transmedial environment that is open and accessible to various actors, even those with manipulative intentions? Can professional journalism balance the provision of factual information with social responsiveness and engagement? Considering these questions, it seems relevant to recall a point made fifteen years ago by Dan Hallin, a professor of San Diego University in California, which he indicated in his insightful response regarding the

conclusion in journalism's history (Hallin, 2009). In particular, the author's assertion that a "diversity of journalisms" and frequent, often wrenching change are poised to dominate the coming decades seems to be an evident reality. While the nature of contemporary social changes and crises differs when compared to the challenges of media convergence and transmediality at the start of the new Millennium (a reference point for professor Dan Hallin), what remains consistent in these observations is the presence of change itself. As already noted, modern publics in small and large, younger and older European democracies, seem to be divided between those who trust institutions, such as government and journalism, and those who do not, leading to high polarization. Similarly, contemporary journalism's roles must encompass all these diverse publics, ranging from that of the "fourth estate" to that of inclusive communicator and mediator that is equipped with capacities of "attentive listening". History suggests that rebuilding trust after it has been undermined is a lengthy process, implying that we shouldn't anticipate a quick and speedy recovery of journalism (Hallin, 2009). The sustainability of democracy and building trust of institutions such as journalism relies on how well the society is equipped with epistemic capacities. In essence, it depends whether the society is able to make well-informed and fact-based decisions, and whether it is receptive to the reasoning of others. Hence, placing a stronger stress on epistemic capacities training not only for audience groups but also for communications professionals and journalists, and finding right interventions might be a first step in a long process of recovery of both journalism and social trust.

A Lithuanian case of collaborative partnership designed for journalism students to combat disinformation

In the upcoming sections, a brief overview of the media-related situation in Lithuania is provided which sets the context for testing the ideas of human-centered approach and stakeholderism in the realm of societal resilience and digital welfare. A multi-level study, which was designed to test media literacy interventions targeted at journalism students, is used to discuss digital source verification training and its implications for setting standards for the development of resilient professionalism.

Lithuania: A compelling case to resilience analysis

Lithuania presents a compelling case to investigate resilience against disinformation. Lithuania is a small country, located on the northeastern coast of the Baltic Sea, with a population of 2.8 million. Along with the other Baltic countries, such as Estonia and Latvia, Lithuania has been at the forefront of Kremlin propaganda and disinformation for years (DIGIRES, 2022). The news media landscape in Lithuania is diverse and extensive, with Internet media outlets being considered as conventional news channels. This fact is one the 130 OBS* Journal, 2024, Special Issue reasons for the low online media fractionalization (polarization), which implies that radicalistic narratives struggle to gain traction in the public arena (Balčytienė & Horowitz, 2023a). All in all, the Lithuanian media is free and economically viable, although it faces various risks associated with digital transformation, which impact all sectors and forms of content production and dissemination (Jastramskis et al., 2017; Balčytienė & Juraitė, 2022; Balčytienė et al., 2023). In recent years, with the rise of online disinformation, the need for media education and fact-checking training has become more than apparent. To address this need, many high schools in Lithuania have started to offer such types of lessons or sessions of informal training in media literacy. Despite good intentions and support from the Government programs, the utmost challenge that schools face is the lack of adequate knowledge of teachers and lack of suitable teaching materials (Juraitė & Balčytienė, 2022). And this is understandable – the field of digital media education (technologies, tools, applications, and methodologies) is evolving very rapidly, as are the problems (information manipulations, disinformation, populist politics, hate speech, digital ethics issues, etc.) faced by all stakeholders who can be teachers, students, librarians, or policymakers (Frau-Meigs, 2022; Jolls, 2022; Bennett & Livingston, 2018; Stix & Jolls, 2020; Carlsson, 2019). Despite intensified policymaking actions based on the growing concern about online disinformation and manipulations in the country, people's actual efforts to apply informed strategies for verifying information they receive from online sources are minimal. According to a recent Eurostat survey (Eurostat, 2021), just 1 out of 10 Lithuanians choose to check suspicious online information, marking one of the lowest results among all the countries measured⁵. On the other hand, Eurobarometer (2022) surveys suggest that people in the Baltic countries are more often confronted with disinformation than in other European countries and close to 60% of respondents boldly acknowledge that they are

⁵ Eurostat (2021). How many people verified online information in 2021? <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20211216-3>.

confident in their ability to recognize disinformation⁶. Conversely, many of those who express confidence in ability to discern online disinformation have had experiences sharing misleading online content. Moreover, as revealed by the DIGIRES⁷ survey in Lithuania, such sharing is often motivated not only by ignorance, due to falling by manipulative teasers and other reasons, but also for amusement (DIGIRES, 2022). To sum up, the urgency of media and information literacy becoming a strategic guideline for all communication agents, not just for education and media sectors, remains a matter of high concern in Lithuania.

Young people, journalism students, and professional learning

Digital technologies, especially social media, have become an essential part of young people's lives, providing multiple opportunities for personal development, access to information, communication, entertainment, socialization, creativity and civic participation. Even before the global pandemic, children and young people have always been at the leading edge of the digital future: in 2019, UNICEF found that a third of internet users are children under 18 (UNICEF, 2019). At the same time, the Covid-19 pandemic has had an integral role in the use of technology by youth: education, social and civic life, everything has moved into the digital space – full of limitless information and attractions. Despite these opportunities, however, recent studies reveal that young people in the media face numerous risks, including challenges related to online disinformation, privacy breaches, etc. The problem is particularly apparent among those young people, whose cognitive and emotional development makes it much easier to manipulate them and influence their attitudes and behaviours than adults (Livingstone, 2014). The intensive use of technology means that today's young adults are more engaged in the virtual world than ever before, but it also implies that the prevailing dangers can reach them more easily. In the era of digitalization, the younger generation, particularly students of journalism (as exemplified in this research), must possess familiarity with a wide range of topics such as entrepreneurship, property rights, managing social media, source verification, creating content, and digital safety. While it is becoming increasingly important for students to understand such topics and build their capacities and skills on them, many higher education journalism schools lack the curricular flexibility to teach such issues in depth. As it was

⁶ Flash Eurobarometer (2022). News & Media Survey 2022. European Parliament. <https://europa.eu/eurobarometer/surveys/detail/2832>.

⁷ DIGIRES (<http://digires.lt>) is an Association with founders in academic, media and education fields. The activities performed center around media literacy trainings, raising public awareness of and alertness towards the growth of digital harms.

concluded by Berger and Foote (2017) universities are entering a period in which hybrid solutions are required. This is where collaborative partnerships can be utilized for greater support, inclusiveness and enhanced epistemic capacity building.

Methodology: Collaborative source verification as epistemic practice

In this section, we will present a brief example of the pilot project, which was constructed with all the previously discussed concepts in consideration. In our completed and examined pilot case, during October-November 2022, eighty-nine Vytautas Magnus University (Lithuania, Kaunas) students of Public Communication BA program and 575 high schoolers of 9- 10 grades from Kaunas city high schools participated in the series of trainings that focused on learning about different techniques and strategies of digital source verification. The fundamental idea driving the four training sessions of the specifically designed DIGIRES pilot study module, which included 12 academic hours of integrated lectures and consultations on “lateral reading” strategies as well as scenarios of fact-checking and source verification, aimed to offer a comprehensive yet targeted approach not only to media literacy education but also to the enhancement of epistemic and professional capacities of journalism students. At the center of all activities was a task aimed to engage in collaborative acts of learning with scientists and professional fact-checkers while testing source verification strategies. Such an approach is multilayered as it covers complexities of the digital transmedial environment defined by platform-logic, types of disinformation narratives and information manipulations, the effects of disinformation on people (such as why online disinformation is so persuasive), and design and presentation strategies for delivering checked and verified content to other users. At the end of the training, the students worked in groups and prepared individual media literacy lesson plans on fact-checking to be conducted during their visits to Kaunas’ High-schools. Journalism students had the chance to consider and generate innovative ideas on how to approach media literacy, fact-checking and related issues that would be appealing and practically applicable for high-school students. Finally, students produced media products with tips on how to check digital information. These media products and reflections on training were presented at the improvised workshop at the end of the course. For research purposes throughout the course, the students were required to maintain reflective diaries with questions, which were answered at the conclusion of the course, considering their cognitive, emotional and behavioral

progressions. These responses were compiled into a corpus of student answers and reflections, which was subsequently subjected to qualitative analysis. As revealed in students' answers, the learning journey disclosed substantial improvement in their self-efficacy assessments related to their digital media literacy and critical thinking skills, fact-checking knowledge, and their understanding of the overall national information ecosystem. Moreover, the acquired self-efficacy enabled students to reflect not only on the prevailing information habits of young people but also what types of solutions and methods work best when it comes to journalism training with media literacy interventions aimed at addressing information disruptions. Here are some excerpts that indicate how possessing a supporting system of expert trainers with specialized knowledge in fostering a collaborative learning culture for epistemic development enhances the overall learning experience:

*"The lateral reading method has become my main fact-checking approach that I have to use in practice when I encounter potential cases of misinformation on the Internet or in the media. In the past, even before I studied this subject, I even intuitively had to do something similar – when reading a news story that seemed to present inaccurate information, I would look for alternative sources, try to track down the authors and cited sources. In this case, **we managed to define this concept**, this mode as a real, existing anti-disinformation tool."*
(Andrius)

*"At school, I showed the children a fake story I had created and even 70% of the students believed it. I realized that it is very easy to create and spread lies, but it is more **difficult to convince a person with arguments and facts** when he has already believed misleading information. <...> The spread and quantity of disinformation and false information is not decreasing; it is important to learn to distinguish lies from the truth. In order for us to be as little confused and lost as possible and for no one else to deceive us, we **must be constantly alert**."* (Bernadeta)

The two brief cases of students' responses presented above can serve as illustrations of self-efficacy, a factor that critically influences human action. In these instances, self-efficacy denotes a self-assured perspective on one's capability to cope with life challenges. It appears in relation to specific skills or competences, such as the ability to conceptualize practice, the

skill of persuasion, and being vigilant. As such, self-efficacy relates to the individual's overarching sense of self, a significant element in both an individual's sense of personal and professional identity. Therefore, self-efficacy should be considered as a fundamental educational objective.

Results discussion and best practice recommendations

Our experience with journalism training has shown that collaborative knowledge exchanges during the learning stage can serve as a powerful tool in nurturing self-efficacy and awareness toward resilient professionalism. This equips young journalism students with unique epistemic capacities to build informed accountability and ethical decision making. As revealed through sessions of self-reflection, understanding the interests, needs, values, and even limits of others required participants to see beyond their own personal and institutional frames of reference and viewpoints. In the context of professional advancement in fact-checking to discern disinformation, journalism students must not only be aware of information manipulations as such, but also must possess digital skills of using available instruments to tackle and reveal falsifications. In this practical study, we had a hypothesis that proved to be accurate. We were convinced that, given their future profession's demand for high intensity and networking with different experts, collaborative strategies must also be applied in learning situations. Therefore, mutual teaching and partnerships of stakeholders (scientists and fact-checkers) was regarded as an appropriate pedagogic strategy to bring the experiences and competences of those stakeholders together. Knowledge sharing and content production through collaborative partnerships was experienced as a "circular process" rich in demonstration and practically testing. As proved in examples in the section above, when journalism students engaged in collaboratively structured activities to achieve concrete information verification tasks, they were most likely to develop a more comprehensive epistemic perspective and advance their capacities. Several valuable lessons have been learned, and practical tips for good practice have been uncovered. Firstly, when developing epistemic capacities of journalism students, it is essential to invite experienced stakeholders such as disinformation analysts, professional journalists and fact-checkers, to share their expertise, insights, lessons learned in their professional lives, as well as solutions to complex issues. This affords students the opportunity to contemplate the information and knowledge they have acquired, selecting the relevant and personally resonant aspects that connect with their own world. Students then apply that

knowledge within their own social networks and communities: families, friends, peers, where it is possible to get more feedback, insights, and differentiating views. Furthermore, when it comes to enhancing the epistemic capacities of journalism students through factchecking and source verification, it becomes crucial to look beyond academic research and previously tested pedagogical frameworks. Instead, practical and real-life interventions from experienced journalists, scientists and experts who can share their knowledge should be prioritized. Fact-checking is a specific genre which requires high level professionalism and specific capacities (Himma-Kadakas, 2022). A fact-checker must be proficient in using a variety of tools, interpreting statistical data, comprehending the structure of scientific articles, grasping academic sources, and maintaining a general understanding of developments in the world of science. On the other hand, debunking false claims and substantiating factual accuracy requires journalists to rely exclusively on credible primary sources, research data, official records, and insights from scientists and experts. At the same time, as an outright technology-dependent professional practice, fact-checking and source verification advances principles of professionalism by introducing new forms of ethics and accountability. Lastly, we conclude that fostering trust in the early stages of acquiring professional skills not only enhances collaborative efforts and closes the trust gap between the partners but also plays a crucial role in the application of epistemic capacities in everyday situations. For example, echo chambers in which many young individuals are lost, manipulate belief systems, leading them away from the pursuit of truth and reliance on trustworthy sources. In relinquishing these epistemic goals, echo chambers entice their members with the allure of unwavering certainty and simplistic consistency (Nguyen, 2020). And another example is provided by Lynch and Gunn (2021) who, in their examination of the relationship between epistemic agency and the Internet, assert that individuals acting as epistemic agents, when actively seeking knowledge, strive to develop valuable intellectual qualities, skills, and abilities. This self-improvement process empowers them to demonstrate a respectful attitude and trust towards their peers, reflecting an openness to learn from others. To conclude, collaborative partnerships require time to develop. As time progresses, trust strengthens, and there is a natural evolution in capacities and self-efficacy, exemplifying the mutual commitment to addressing complex online communication issues (Ansell & Gash, 2008). This achievement shouldn't be overlooked. Rather, it should be integrated into the early stages of journalism education.

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