
photo: Jakub Lacheta

Denisa Čiderová, Eva Belvončíková

Media Literacy In Higher Education: "Know-Where" and "Know-Whether"... Know-Why to Know Better?

DOI: https://doi.org/10.34135/mlar-24-01-02

ABSTRACT

With the objectives of the Grünwald Declaration (1983), the Alexandria Proclamation (2006), the UNESCO Paris Agenda (2007) and the concept of media literacy (alias understanding and using mass media in either an assertive or non-assertive way, including an informed and critical understanding of media, the techniques they employ and their effects) on mind, it goes without saying that any communication takes place in a certain context (set of facts and circumstances surrounding a media text for the purpose of its interpretation as defined by Wilson et al., 2011, p. 182). Having media literacy on mind, "know-where" to search for information and "know-whether" such researched information identifies facts imply in our understanding media and literacy, respectively. Then, know-why corresponds with our perception of the context (Wilson, 2011), and know better conveys "to know or understand the truth about something" (Merriam-Webster, n.d.). The perspective of Haider & Sundin (2022) is the one that the purpose of information literacy is to support people's knowledge, competencies and resources for their proficient engagement with information (incl. finding, evaluating, producing, and communicating situated information in context-appropriate ways). On the one hand, literacy is a conceptual entity in the context of educational sciences; on the other hand, information literacy (just like media literacy) merely specifies media or information, data, digital, or artificial intelligence (AI) as an entity for literacy to latch onto. In the global survey – addressed to UNESCO networks of Associated Schools and university Chairs in May 2023 slightly over one-tenth of 450 institutions (of which 44% were from Europe) confirmed that they have developed institutional policies and/or formal guidance concerning the use of generative AI applications. Curriculum delivery at higher education institutions adheres to Bloom's taxonomy (Bloom, 1956), which can be applied in two alternative modes: the traditional approach or the flipped approach, in a variety of cultural backgrounds. The aim of our paper is to map the awareness of media (and information) literacy among higher education students at the University of Economics in Bratislava with instruction either in the Slovak language or in the English language. Findings reveal gaps in recognition of sponsored content just like relatively low awareness of generally respected fact-checking online sites with remarkable discrepancies between the cohort studying in the Slovak language and the cohort studying in the English language.

KEY WORDS

"Know-Where". "Know-Whether". Know Better. Know-How. Know-What. Know-Why. Media (and Information) Literacy Education.

1 Introduction

> With the spread of rumors and the distortion of facts, the boundary between true and false has become blurred. […] In this deluge of information, we need more reference points and more rational thinking. And that is why media and information literacy is such a key skill for the education of 21st-century citizens. (Azoulay, 2023a)

On the occasion of the 2023 Global Media and Information Literacy Week, UNESCO Director-General Audrey Azoulay highlighted UNESCO's commitment in line with its mandate "to ensure that fact-checking becomes a reflex for everyone" (Azoulay, 2023b) in the global village. The author of the latter term, the Canadian philosopher and media theorist McLuhan (1964, in Gordon, 1971) reminds us of the contrast between a reader in earlier times and a contemporary cyberspace viewer (alias digital native).

On the one hand, there has been a trend towards "prefixing literacy" with prefixes such as *media*, *information*, *data*, *digital*, etc. to distinguish them; on the other hand, "prefixed literacies" seem to be applied interchangeably, subject to context (Bawden, 2008). With *media literacy* dating back to the 1960s and 1970s (Tuominen et al., 2005), media literacy in terms of curriculum content followed in the late 1970s (Bulger and Davison, 2018). Established literature review on media literacy is provided by Potter (2013), where the author himself speaks about "a large complex patchwork of ideas" mapping a wide variety of complementary approaches with variations in details they cover and principles they stress. In our earlier paper (Belvončíková & Čiderová, 2022b) we referred to an earlier interpretation of media literacy by The National Association for Media Literacy Education (NAMLE). As framed in 2023 by NAMLE, media literacy as an ability (to access, analyze, evaluate, create, and act using all forms of communication) is through *information literacy* supported by a set of skills (in terms of the ability to find, analyze, evaluate, use, and reflect on the needed information).

In theory, the compound form of media and information literacy (MIL) relates to a spectrum of foci with cognitive approaches coexisting with critical approaches: behaviourism, cognitivism, constructivism, nuances in sociocultural approaches, discourse analysis, practice theory, media studies, library and information studies, the educational sciences, psychology, sociology, etc. (see, e.g., Sundin, 2008; Limberg et al., 2012; Erstad and Amdam, 2013; Johansson and Limberg, 2017). In practice, MIL as a "moving target" or rather "aiming at a moving target" relates to three forms of acceleration: technical acceleration, acceleration of social change, and acceleration of the pace of life (see, e.g., Livingstone et al., 2008; Little, 2018; Livingstone, 2018). Albeit media and information literacy (MIL) appears as a joint concept, there have been claims that the media part of MIL has been more voiced in both policy (Berger, 2019) and research (Livingstone et al., 2008).

All in all, MIL has been regarded as a composite concept, framed by UNESCO in the so-called Law 5 of MIL as follows: "Media and information literacy is not acquired at once. It is a lived and dynamic experience and process. It is complete when it includes knowledge, skills and attitudes, when it covers access, evaluation/assessment, use, production and communication of information, media and technology content" (Azoulay, 2019, in *Global standards for media and information literacy curricula development guidelines*, n.d., p. 15). We agree that MIL has a potential beyond mere acquisition of proficiency in the use of certain technologies (Table 1).

Digital Literacy	A subset of media literacy that focuses on the **knowledge, skills, and attitudes** necessary **to understand how digital tools interact with and impact society**.
Social-Emotional Literacy	Social-emotional literacy often falls under categories of social-emotional learning (SEL). Both social-emotional literacy and social-emotional learning focus on **developing healthy identities by helping learners manage emotions and make positive social connections**.
Critical Media Literacy	An **inquiry-based media literacy practice** concerned specifically with critically examining structures, systems, ideologies, representations, and power.

TABLE 1: *Digital literacy, social-emotional literacy, and critical media literacy among core principles of media literacy education glossary of terms*

Source: NAMLE (n.d.-a)

The latest 2023 update of the NAMLE Glossary defining "Core Principles of Media Literacy Education" (Table 1) emphasises *critical media literacy* as an "inquiry-based media literacy practice concerned specifically with critically examining structures, systems, ideologies, representations, and power" (NAMLE, n.d.-a, "Critical Media Literacy" section). Literature points out a seeming schism between two different ideals: on the one hand, an informed citizen (in an individual relation to the society); on the other hand, a rational consumer of information (with the individual's own responsibility concerning information selection and consumption). Next, we proceed to the personalised *communication mix*.

1.1 Personalised Communication Mix

It goes without saying that all "generations" of media are relevant in practice and the role they individually play represents a personalised communication mix. Alternative prefixed forms of information imply an intention behind the claims (e.g. Wardle and Derakhshan, 2017; Søe, 2018): firstly, *misinformation* alias "false information that is passed on without the intention of spreading lies"; secondly, *disinformation* alias "false information that is spread purposely, and the person passing it on is aware of it being false" (Haider & Sundin, 2022, p. 30); and thirdly, *malinformation* "is correct in itself, yet it is taken out of context and given new meaning in a way that makes it intentionally misleading and potentially harmful" (Haider and Sundin, 2022, p. 31). Starbird et al. (2019) wonder about the intention of a bot, of an algorithm, or of a computer program, bearing in mind their automated intention to maximise data extraction by exploiting engagements: "at best it is collateral entertainment, at worst collateral damage" (Haider & Sundin, 2022, p. 31). Thus, the spread of disinformation on social media depends on the one hand by default on the way many of such platforms are designed; and on the other hand, on people's active participation.

The latest World Economic Forum (WEF) *The Global Risks Report 2024* presents the findings of the Global Risks Perception Survey (GRPS) based on insights from approx. 1,500 global experts.

> Misinformation and disinformation has risen rapidly in rankings to first place for the two-year time frame […] No longer requiring a niche skill set, easy-to-use interfaces to large-scale artificial intelligence (AI) models have already enabled an explosion in falsified information and so-called 'synthetic' content, from sophisticated voice cloning to counterfeit websites. Synthetic content will manipulate individuals, damage economies and fracture societies in numerous ways over the next two years. Falsified information could be deployed in pursuit of diverse goals. (World Economic Forum, 2024, pp. 16, 18)

Both, from the stakeholder perspective (in alphabetical order: academia, civil society, governments, international organizations, private sector) and across a spectrum of age groups, "Misinformation and disinformation" were pointed out as the top-ranking global risk by severity in the short run (Figure 1).

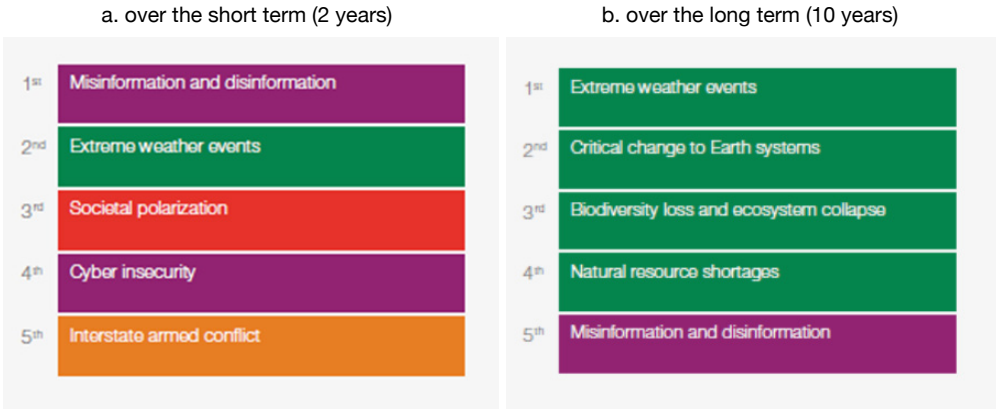


FIGURE 1: *Global risks ranked by severity*

Source: World Economic Forum (2024)

Second-ranking after "Misinformation and disinformation" were "Extreme weather events", and "Societal polarization" came third. In the long run (10-year perspective), however, the environmental risk category ("Extreme weather events") is expected to dominate (Figure 1), and the technological risk category ("Misinformation and disinformation") will follow suit next. Therefore, let us now introduce how the European Union (EU) views the harm resulting from disinformation and misinformation:

> Disinformation is false or misleading content that is spread with an intention to deceive or secure economic or political gain, and which may cause public harm. Misinformation is false or misleading content shared without harmful intent though the effects can be still harmful. (European Commission, n.d.-a, para. 1)

In this respect, Cannon et al. (2020) bring to our attention that a mere combination of knowledge-based curricula and a focus on performance "runs the risk of leaving media and information literacy out" and might compromise critical understanding, as information access has shaped both everyday life and education (Staněk et al., 2019). Hence, we are going to address taxonomy of knowledge and practical approaches to the search for information in educational settings or situations in the final part of our Introduction.

1.2 Constructivist Theory in Reality: Digital Native Students with Digital Tools in a Digital World

The progression from know-nothing, know-how and know-what to know-why in the concept by Zeleny (1987) is the progression from "muddling through", through efficiency and effectiveness to explicability. Reverse sequence of know-why, know-what and know-how by Garud (1997) symbolises the shift from "understanding of the principles underlying phenomena" through "appreciation of the kinds of phenomena worth pursuing" to "understanding of the generative processes that constitute phenomena", respectively. "What" is in the focus of DiYanni's interpretation (2016, p. 14: "How do you 'know what' you know?") of van de Lagemaat (2006, p. vi: "How do you know?") and Markman's (2012) "Do you 'know what' you don't know?" concept self-interpreted as "You probably don't know as much as you think you do" (Markman, 2012). While Markman's reflection challenges the reader by claiming that the reader probably doesn't know as much as the reader thinks, van de Lagemaat's theory appeals to the reader that empirical knowledge acquired through the reader's senses "cannot always be trusted, for sometimes you don't observe things accurately. Taking the word of others

can also lead you into error when others are untruthful or mistaken" (DiYanni, 2016, p. 14). Hence, empirical knowledge relevant to implicit knowledge (i.e. procedural or tacit knowledge addressing know-how) is complementary to explicit knowledge (know-what and know-why in terms of facts and science, respectively) as communicated by Belvončíková and Čiderová (2022a).

In our earlier paper (Belvončíková & Čiderová, 2022b) we referred to Bloom's taxonomy for curriculum delivery at higher education institutions in two modes. The bottom-up (Bloom, 1956) traditional approach rests on the facilitator's initial introduction of new material to students (stages 1-2) for their follow-up *laissez-faire* individual completion of assignments. The top-down (Erasmus+ Project, 2015) flipped *laissez-moi faire* approach initially lets students familiarize themselves with the new material (stages 1-2) to engage then in elucidatory discussion with the facilitator (stages 3-6). Whereas traditional frontal teaching assigns the facilitator the role of an "authoritative truth-teller", students' own enquiry and self-directed learning turn the facilitator into a mentor or supervisor, as Haider and Sundin (2022) put it. (Proud of) being digital natives, students navigate with digital tools in the digital world, and though there may be a difference between public service news media and commercial news media in terms of funding, both of them still seek to be seen and to be accessible on the same commercial platforms that are beyond their control. The ever more complex settings have been characterized by parallel asymmetries (Staněk et al., 2019): firstly, asymmetry between information providers and information users; secondly, asymmetry between information holders and information vendors; thirdly, asymmetry between those who process information and those who utilise information. The growing numbers and relevance of fact-checking organisations in the New Millennium (Graves & Amazeen, 2019) relate to the spread of new ways of publishing, sharing, and circulating information (including the social media); critical information literacy is then targeted at developing critical consciousness (Elmborg 2006).

Having identified a research gap and with MIL on mind, "know-where" to search for information and "know-whether" such researched information identifies facts imply in our understanding media and literacy, respectively. Then, know-why corresponds with our perception of the context (alias the set of facts and circumstances as defined in the op. cit. Wilson, 2011), and know better conveys "to know or understand the truth about something" (Merriam-Webster, n.d.).

Although research in this area in Slovakia was attracting attention of researchers mostly in the last decade, to name mainly Kosturková (see, e.g., 2021; 2016a; 2016b; 2014, in Bodoríková et al., 2023), followed by e.g. Novotná and Petrasová (2021), Bodoríková et. al (2023), the main research objects were either predominantly educational students preparing for their professional careers, or secondary school students. The aim of our paper is to map the awareness of media and information literacy among higher education students at the University of Economics in Bratislava. Our research addresses students of economics/business/management and/or tourism, with MIL not being in their core focus. Still, they should resort to critical thinking in their academic writing practices. Additionally, a group of native students studying in the Slovak language (alias Slovak students) is complemented with a group of international students studying in the English language.

Structure of the paper is as follows: Introduction has already presented theoretical backround to the topic of media and information literacy and fact-checking together with the aim of the paper. This is followed by Methodology specifying both cohorts of students where MIL was researched. The Results section then presents how higher education students display their (lack of) familiarity with biased and unbiased sources of information, primary and secondary sources, and their knowledge about fact-checking sites, too. Discussion dwells on NAMLE principles linked to five fundamental questions related to newswriting in terms of their applicability in practice across cultures in order to improve MIL and its awareness. Conclusion represents a digest of various interpretations of the taxonomy of knowledge, summarises key research findings and outlines future recommendations for MIL education.

2 Methodology

Research of the students' media (and information) literacy awareness in terms of familiarity with sources and fact-checking was implemented in the course "Intercultural Communication" taught in English and Slovak at the University of Economics in Bratislava. Similarly, research on critical thinking of Slovak university students was carried out earlier by e.g. Kosturková (2014, in Bodoríková et al., 2023), Novotná and Petrasová (2021), but the research sample was university students of educational studies, not students of economics/business/management and/or tourism. Our research therefore adds to the existing research from a different disciplinary backround.

The respective "Intercultural Communication" course seeks to address Blackler's taxonomy of knowledge (Tallinn University, n.d.) structured into:

- Embrained knowledge (knowledge dependent on conceptual skills and cognitive abilities);
- Embodied knowledge (action-oriented, i.e. acquired by doing and rooted in specific contexts);
- Encultured knowledge (in search of shared understandings in cultural context);
- Embedded knowledge (associated with systemic routines);
- Encoded knowledge (information is conveyed by signs and symbols: "To the traditional forms of encoded knowledge, such as books, manuals and codes of practice, has been added Information encoded and transmitted electronically" (Tallinn University, n.d., "Blackler's taxonomy of knowledge" section, para. 2).

Hence, the "Intercultural Communication" course is designed to facilitate to students' abilities to address the multidimentional nature of cultural intelligence; to acquire knowledge of verbal and non-verbal communication; and to follow trends in intercultural communication as a prerequisite for further development of qualification. In terms of skills, students focus on a holistic approach to the ethical, societal and economic context of cultural intelligence, and through effective participation in teamwork they apply and develop their individual intercultural competence in practice. The conducted anonymous opinion survey was inspired by the UNESCO Dynamic Coalition Initiative, a founder and one of the partners of the Open Educational Resources Dynamic Coalition initiated in reaction to the massive disruption of education due to the COVID-19 pandemic. Eighteen questions structured into two thematic blocks dealt with media (and information) literacy including Internet/online fact-checking; the thematic scope of this paper addresses for the most part Internet/online fact-checking. Individual questions of the thematic blocks were entirely new to students. An online questionnaire, with all questions closed, compiled in Google forms was applied as a suitable research tool and Google form software was used to support the analysis. In contrast, previous research (Novotná & Petrasová, 2021; Kosturková, 2016) on critical thinking in general used standardized Watson Glaser test.

In order to complete an anonymous opinon survey we preferred available selection (Švec, 1998), which was determined by the possibilities of the researchers and the willingness of the respondents to participate in the research. The sample consisted of three groups of native (Slovak) students and one group of international students, in total 88 students in the bachelor level of study. It is important to note that the formation of study groups into those of Slovak students and the one of international students was caused exclusively by timetable limits and the effort to avoid overlapping of courses that would make the implementation of Learning Agreements of international students impracticable. The period of data collection was February 2023, the overall response rate was 69% (with identification of the respective group of students while observing individual anonymity). We are able to identify differences among Slovak and international students as Slovak students answered online questionnaire in the translated Slovak version, while the international group of students in the English language. When relevant, we compare our current results from the academic year 2022/23 with our previous sample of students in the predecessor course titled "Communication across Cultures" with data collection for 2021/22 academic year on

the sample of 91 students (Belvončíková & Čiderová, 2022a; 2022b). When relating it to Novotná and Petrasová (2021), they analysed the critical thinking level in two consecutive academic years (2017/18 with the sample of 92 students and 2018/19 with 50 students); the researched cohort of Kosturková (2014, in Bodoríková et al., 2023) comprised 116 university students.

3 Results

> Media literacy has never been as important as it is today. It enables citizens of all ages to navigate the modern news environment and take informed decisions. Media literacy concerns different media and distribution methods. It is a crucial skill for all citizens regardless of age, as it empowers them and raises their awareness. It also helps to counter the effects of disinformation campaigns and fake news spreading through digital media. (European Commission, n.d.-b)

Media (and information) literacy awareness in terms of familiarity with primary and secondary sources and fact-checking mainly via using online tools available on the Internet was the main focus of the online anonymous opinion survey. Our interest in students' awareness of primary and secondary sources of information rests on the fact that they are crucial for students' seminar papers and final theses throughout their studies at a higher education institution.

The questionnaire addressed primary sources and a press release when we inquired "which statements about press release students deliberate as false" (Figure 2). Almost half (48%) of the students view the statement that "a press release is similar to a product promotion or sales pitch" to be false, and this is correct.

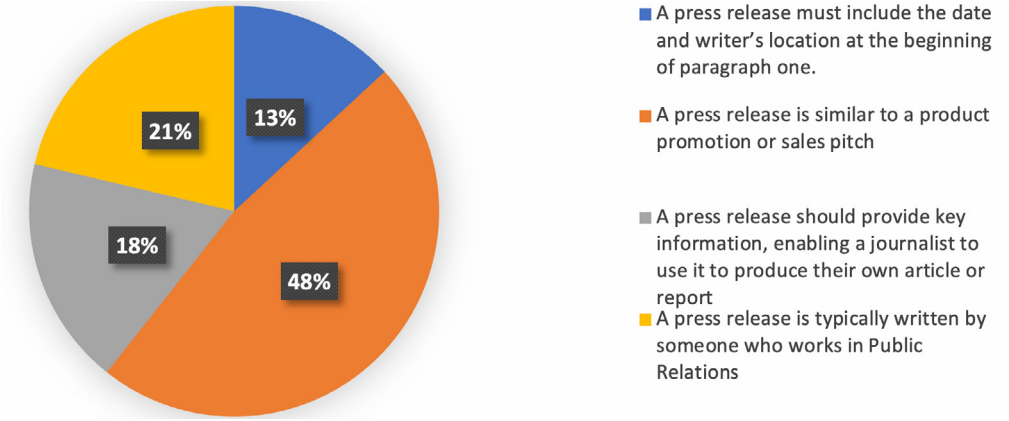


FIGURE 2: *Indicate which one of the following statements about press releases is false*

Source: own processing, 2023

A press release may be promoting something (such as an event, product, or service), but it will lose credibility if it reads like a marketing pitch. The second least favoured option (18% of the sample) stated that press release should provide key information, enabling a journalist to use it to produce their own article or report. Nevertheless, this statement is true, not false as a press release should include core information about "who, what, where, when, why" (5Ws), and "how" of any particular story. In the case of Slovak students, this was the second most opted answer (24%), while in the case of international students it was the least favoured option (11%).

The skill "to distinguish sponsored content" ought to be deemed of crucial importance for the awareness that mainly prominent features of a product or a service tend to be advertised. Among some examples of sponsored content (Figure 3), the only correct case was the one

preferred by 57% of students in total, i.e. when "a company pays a newspaper to place a link on the newspaper's website, linking to an article that directly or indirectly promotes the company's products and this should be labelled as such on the web page" (out of which 52% correspond with Slovak respondents; and up to 64% are associated with international respondents).

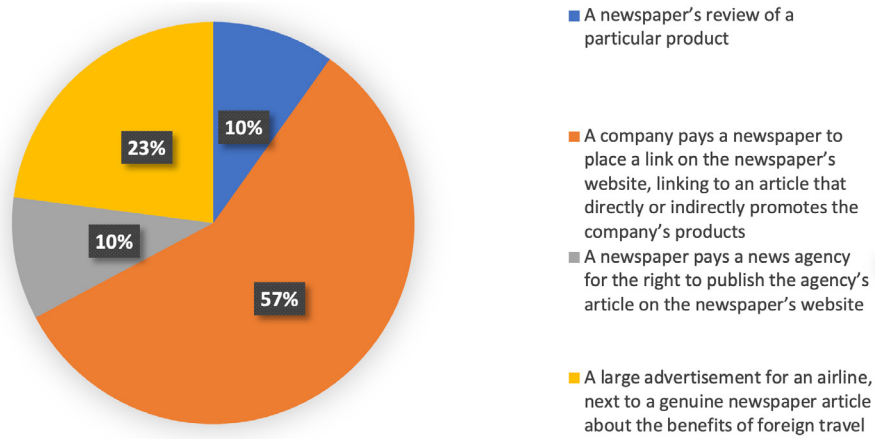


FIGURE 3: *Which of the following is an example of "sponsored content"?*

Source: own processing, 2023

Another very resembling option was the one of "a large advertisement for an airline next to a genuine newspaper article about the benefits of foreign travel"; yet, the real sponsored content occurs when the advertisement acts as if it was a newspaper article. Major discrepancy was observed when the figure registered in the reponses of Slovak students exceeded a double (30%) documented in the answers of international students (14%). This at first sight similarly appearing option confused almost one-fourth of respondents.

A question "whether a biography belongs to the primary sources of information" was posed. A bit more than two-thirds of the respondents consider it a primary source (Figure 4); still, there is a remarkable difference between Slovak respondents (64%) and international respondents (75%). Not being a primary source according to the UNESCO Dynamic Coalition Initiative, it stands for a secondary source because it is not written by the person who is the subject of the biography (albeit autobiography is a primary source); so only one-third of the students was right.

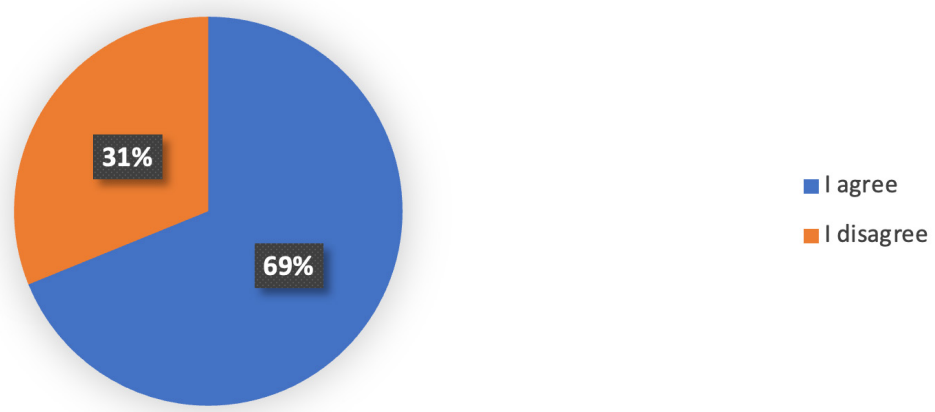


FIGURE 4: *Do you agree or disagree with the statement "A biography is an example of a primary source of information."?*

Source: own processing, 2023

Next, the respondents were asked to recognise "the secondary source of information" among four options. The highest percentage of them (over one-half) properly answered that it is an academic journal article commenting on someone else's scientific research (Figure 5). Nonetheless, international respondents (61%) outnumbered Slovak respondents (49%). The second most frequent option considered (20%) was an academic article presenting the findings of a research project to be a secondary source; this is, undoubtedly, a primary source together with eyewitness account recorded in a diary, and a piece of creative writing.

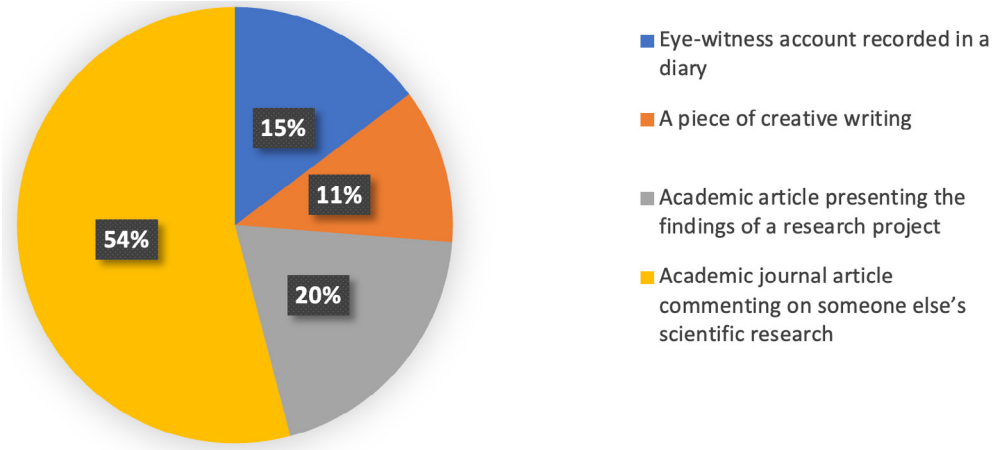


FIGURE 5: *Which of the following is a secondary source of information?*

Source: own processing, 2023

Bearing in mind that quotations are essential when preparing literature review or in the various sorts of academic texts, one of the questions was devoted to sources of quotations (Figure 6). Unlike three-quarters in the previous cohort (2021/22), slightly above two-thirds of the students correctly expressed their consent with the statement "Google Books is a good starting point for checking the real source of quotations".

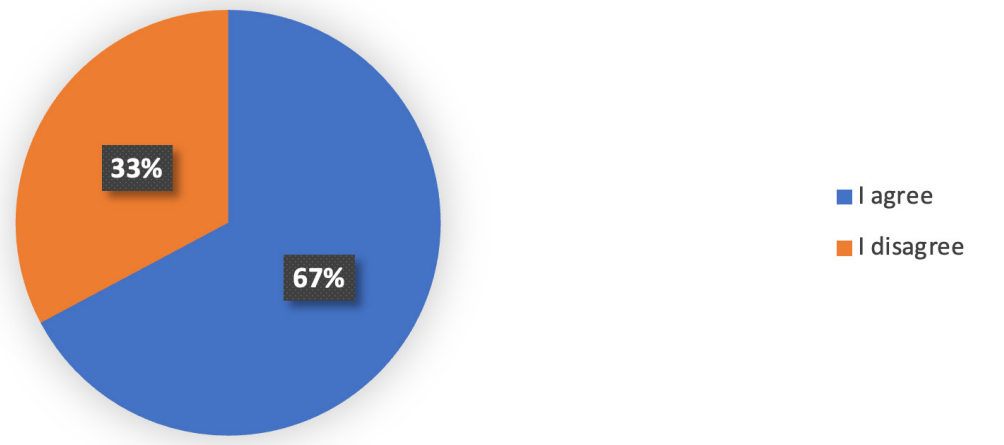


FIGURE 6: *Do you agree or disagree with the statement "Google Books is a good starting point for checking the real source of quotations."?*

Source: own processing, 2023

With the fact that Internet sites often change and develop on mind, the next question addressed "the tool for monitoring these changes". Among four options (Figure 7), just one was correct: The Wayback Machine with almost one-third of the respondents being familiar with its existence and function (out of which Slovak respondents with 21% represented roughly one-half of those provided by international respondents). In accordance with the respective provider archive.org, such tool "enables to capture, manage and search collections of digital content without any technical expertise or hosting facilities […] A person could capture a web page as it appears now for use as a trusted citation in the future" (Belvončíková & Čiderová, 2022a, p. 17). Evenly distributed were two other incorrect options: Google Scholar and Google Snippets in the case of Slovak respondents while the figure for Google Snippets matched the answers of international respondents. On the year-on-year basis, the total score of one-quarter in favour of Google Snippets combining Slovak and international respondents corresponds in the 2022/23 cohort with the 2021/22 cohort.

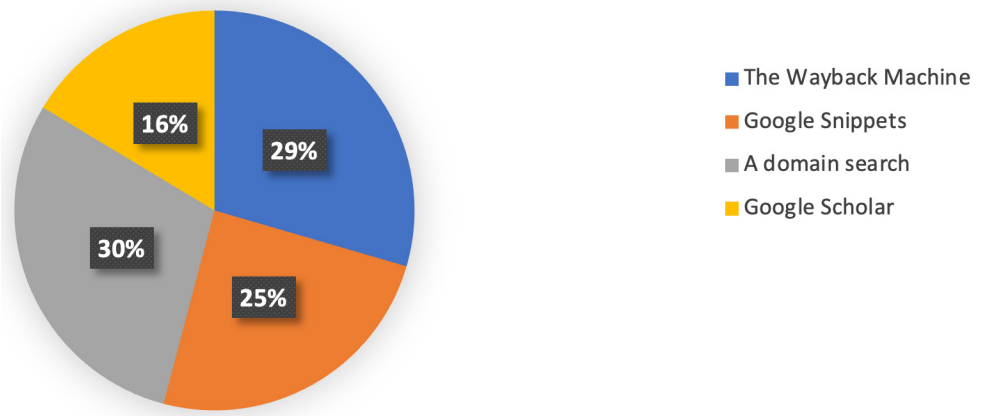


FIGURE 7: *You can check for web page changes and disappearances over time using which of the following tools?*

Source: own processing, 2023

In the information age a tremendous number of information appears minute by minute; in this respect, we adhere to the view that "AI will not be a panacea for the many deep-seated problems and challenges facing journalism and the public arena. Technology alone cannot fix intractable political, social, and economic ills." (Simon, 2024, p. 39). With an ongoing information deluge (since the Covid-19 era also referred to as "infodemic" or "information explosion") often to be misrepresenting (misinformation) or even intentionally misleading (disinformation), (fact-) checking sites have become of the essence. Wondering whether the respondents are familiar with the respected Internet fact-checking site ("go-to source what is true and what is not"), the question was if "it is true that Spoke.com is a well-respected fact-checking site". About one-half (by 9 pp less than in the previous edition) of the students disagreed with the statement, as shown in Figure 8a. A startling outcome of the survey is the mirror effect observed when comparing both groups of respondents (Figure 8b-8c), given that the spot-on identification of the fact-checking website is Snopes.com (not Spoke.com).

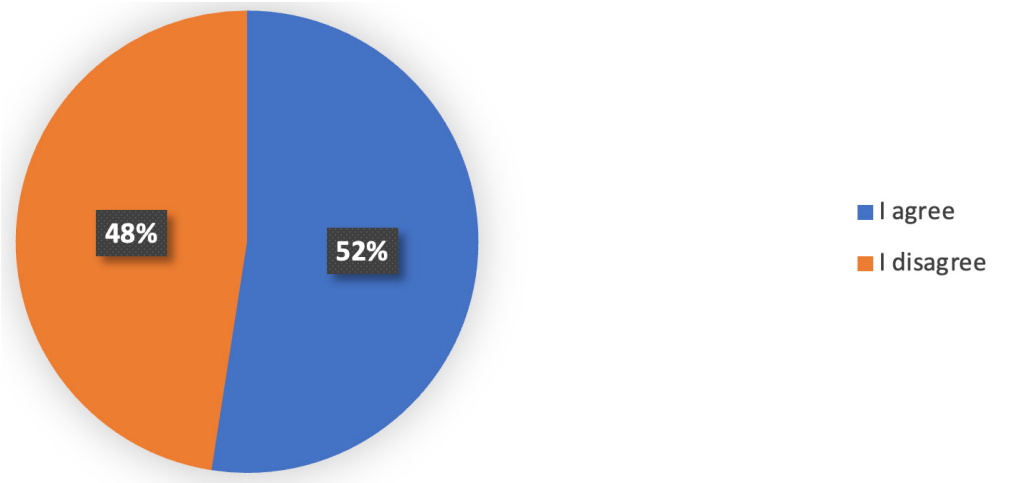


FIGURE 8a: *Do you agree or disagree with the statement "Spoke.com is a well-respected fact-checking site."?*

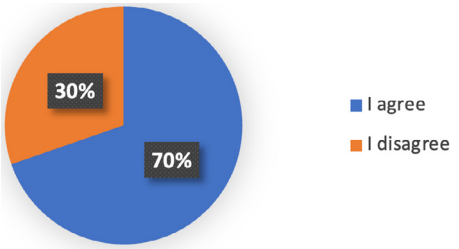


FIGURE 8b: *Slovak respondetns*

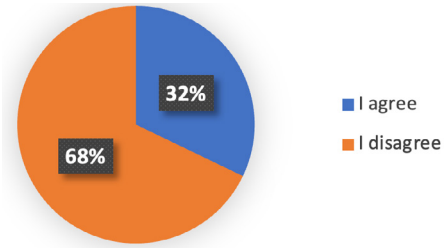


FIGURE 8c: *Intenational respondents*

FIGURE 8b-8c: *Do you agree or disagree with the statement "Spoke.com is a well-respected fact-checking site."? (2022/23 Slovak and 2022/23 International cohort)*

Source: own processing, 2023

Following the initial well-respected fact-checking site the students were asked "about other respected fact-checking sites that they might have knowledge of". Even though we bear in mind that not all sites listed among the multiple choices offered in the previous 2021/22 edition (Figure 9a) were linked to correct answers, the most selected one and also the correct one was Politifact (a site for US news with total 62% of the respondents across the whole cohort). Conversely, in the current 2022/23 edition (Figure 9b), the preference of respondents shifted from the Politifact site to the Truth Facts site with mirror-effect score: the Truth Facts site (total 62% of the respondents across the whole cohort) option was followed by the Politifact site (total 50% of the respondents across the whole cohort). In fact, however, the Truth Facts site as a humorous site is not the correct answer.

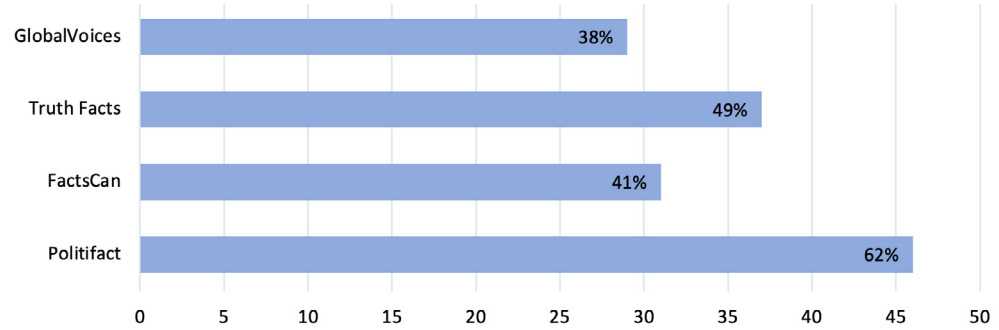
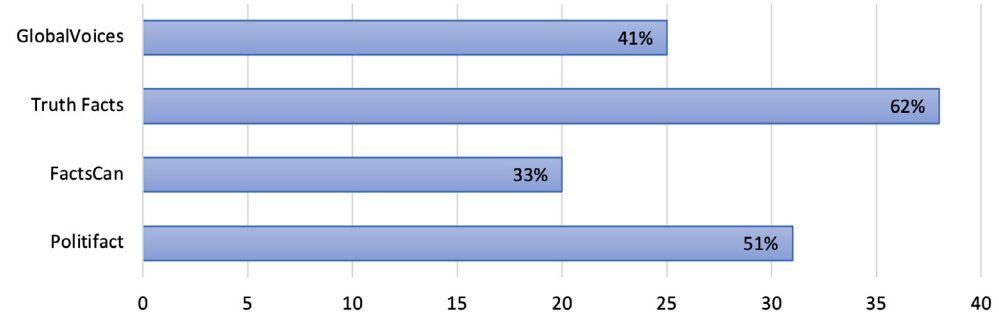


FIGURE 9a: *Which of the following are generally regarded as reputable fact-checking sites (2021/22 edition)?*

Source: own processing, 2023



Note: numbers on the x-axis represent frequency of answers

FIGURE 9b: *Which of the following are generally regarded as reputable fact-checking sites (2022/23 edition)?*

Source: own processing, 2023

The remaining ones are FactsCan (41% and 33%, respectively) as a fact-checking site relevant to Canadian federal politics, and GlobalVoices (38% and 41%, respectively) as a site for citizen journalists.

4 Discussion

> [P]eople should consume media more critically. Media literacy is a "game changer" in addressing negative content dimensions of media, including media manipulation, misinformation, disinformation. (European Commission, 2023).

Founded in 1944 in the tradition of the world's first news agency Havas established in 1835, Agence France-Presse (AFP) represents the only European one among the world's three major news agencies. Mission of AFP is "to provide rapid, comprehensive, impartial and verified coverage of the news and issues that shape our daily lives" (Agence France-Presse, n.d.-a, para. 1). With the world's leading fact-checking network comprising 140 journalists working on five continents in 26 languages, AFP addresses directly the general public through its own AFP Fact Check site (Agence France-Presse, n.d.-b).

Furthermore, based on its slogan "Anyone can share misinformation, anyone can call prey to disinformation..." AFP designed a set of tips to avoid the traps of misinformation, which we linked to our own interpretation of the five fundamental questions related to newswriting:

- WHO? Does the article you are reading provide at least one source of information?
- WHAT? Is the title consistent with the details in the article?
- WHERE? Always check where an image comes from

- WHEN? Remember to check the publication date
- WHAT-ABOUTS? Check any comments that may appear below the article or publication.

At this moment, let us reiterate our reflections introduced in our earlier paper:
The vast and multiplying amount of information available on the Internet challenges the humankind in confrontation with (mis)information; as Specht (2018) commented, one needs to refer to common sense when dealing with news reports, to reflect on the reliability of a source and to consider whether other media report the same issue/news. Know them, know that, know how, know where, *know why*, and *know whether* have been explored mainly since the beginning of the 20th century. Procedural or tacit knowledge (know-how) can be, according to Britannica (n.d.), transferred with difficulties to another person and is related to "how to accomplish something, as opposed to know-what (facts), know-why (science), or know-who (communication)". (Belvončíková & Čiderová, 2022a, p. 20)

Focus of this paper now brings us to the "Key Questions to Ask When Analyzing Media Experiences" by NAMLE (Table 2a).

Authors and Audiences	
Authorship	Who made this? When was this made?
Purposes	Why was this made? What does this want me to do? Who is the target audience?
Economics	Who paid for this? Who makes money from this?
Messages and Meanings	
Content	What could someone learn from this? What meanings, values and perspectives are obvious, and what are implied? What is left out that might be important to know?
Techniques and Format	Where or how was it shared with the public? What techniques are used to communicate meaning, and why?
Reflections and Evaluations	
Interpretation	What is my interpretation? How might different people understand this message differently?
Responses	How does this make me feel? How do my emotions influence my interpretation of this? If I feel the need to respond, what actions could I take that would feel productive?
Credibility	Is this fact, opinion, or something else? How credible is this (and how do you know)? How do I know I can trust this source to give me credible information about this topic?

TABLE 2a: *Key questions to ask when analyzing media experiences by NAMLE*
Source: NAMLE (n.d.-b)

As mentioned earlier, Bloom's taxonomy for curriculum delivery at higher education institutions is feasible in two modes: the bottom-up traditional approach and the top-down flipped approach. By the same token, the progression from know-nothing, know-how and know-what to know-why in the concept by Zeleny (1987) mirrors the reverse sequence of know-why, know-what and know-how by Garud (1997). Such a perspective inspired us to consider the 5Ws from a "traditional" and a "flipped" point of view (Tables 2b-2c).

Table 2b	Press release	Sponsored content	Biography	Secondary source of information	Table 2c
Authors and Audiences	Who? When?	Who?	Who? When?	Who?	**Authors and Audiences**
Authorship					Who made this? When was this made? **Biography** (including eye-witness account recorded in a diary)
Purposes					Why was this made? What does this want me to do? Who is the target audience? **Primary and secondary sources of information** (including academic journal articles)
Economics					Who paid for this? Who makes money from this? **Sponsored content**
Messages and Meanings	What? Where?	What?	What? Where?	What?	**Messages and Meanings**
Content					What could someone learn from this? What meanings, values and perspectives are obvious, and what are implied? What is left out that might be important to know? **Press release**
Techniques and Format					Where or how was it shared with the public? What techniques are used to communicate meaning, and why? **Source of quotations** **Internet site changes' monitoring**
Reflections and Evaluations	What-abouts?	What-abouts?	What-abouts?	What-abouts?	**Reflections and Evaluations**
Interpretation					What is my interpretation? How might different people understand this message differently? **Intercultural communication**[1]
Responses					How does this make me feel? How do my emotions influence my interpretation of this? If I feel the need to respond, what actions could I take that would feel productive? **Communication** (including mass communication[2]; interpersonal communication[3]; organisational communication[4]) **Primary and secondary sources of information** (including a piece of creative writing)

1 Authors' note: Term introduced in Belvončíková and Čiderová (2022b).
2 Authors' note: Term introduced in Belvončíková and Čiderová (2022b).
3 Ibidem.
4 Ibidem.

Credibility					Is this fact, opinion, or something else? How credible is this (and how do you know)? How do I know I can trust this source to give me credible information about this topic? **Fact-checking site Spoke.com**[5] **Other fact-checking sites: GlobalVoices, Truth Facts**[6]**, FactsCan, Politifact**

TABLE 2b-2c: *Traditional (Table 2b) and flipped (Table 2c) approach applied to key questions to ask when analyzing media experiences by NAMLE*

Source: own processing according to NAMLE (n.d.-b)

Any media user tends to consider all types of media experiences related not only to media text ("the message"), but also to both the physical and the technological environment of the message. Firstly, in Table 2b we linked 5W questions to the main headings specified by NAMLE, namely: Authors and Audiences (Who? When?); Messages and Meanings (What? Where?); and Reflections and Evaluations (What-abouts?). A press release compared with a sponsored content just like a biography compared with a secondary source of information necessitate a more complex coverage as not all questions may relate to each media experience. Secondly, in Table 2c we matched categories of the questions included in our questionnaire with subheadings clustered into the main headings (Authors and Audiences; Messages and Meanings; Reflections and Evaluations) specified by NAMLE, with individual or multiple occurrences. Thirdly, let us outline also an eclectic adaptation of the "Key Questions to Ask When Analyzing Media Experiences" by NAMLE (n.d.-b) with reference to additional categories of concepts in the following structure:

- Alias know-what:

What meanings, values and perspectives are obvious, and what are implied?
What is left out that might be important to know?
What does this want me to do?

- Alias know-that:

What is my interpretation?
What could someone learn from this?

- Alias "know-when":

When was this made?

- Alias "know-where":

Where or how was it shared with the public?

- Alias know-why:

Why was this made?
What techniques are used to communicate meaning, and why?

- Alias know-who:

Who made this?
Who paid for this?
Who makes money from this?

- Alias know-them:

Who is the target audience?
How does this make me feel?
How do my emotions influence my interpretation of this?

[5] Authors' note: Question introduced in Belvončíková and Čiderová (2022a); real fact-checking site is Snopes.com.

[6] Authors' note: Question introduced in Belvončíková and Čiderová (2022a); in reality Truth Facts is a humorous site.

If I feel the need to respond, what actions could I take that would feel productive?
- Alias know-how:

How might different people understand this message differently?
- Alias "know-whether":

Is this fact, opinion, or something else?
How credible is this (and how do you know)?
How do I know I can trust this source to give me credible information about this topic?

Still, additional questions/answers might arise or aditional occurrences may be relevant. Selected core principles of media literacy education (MLE) by NAMLE are attached in Appendix A and while we are aware that these could be further elaborated into additional questions to be included in the listed categories of concepts above, this would be beyond the scope of the paper. What is important to note is that any media experience should motivate to investigate for evidence.

Haider and Sundin (2022) appeal that the "notion of fact provides an air of objectivity, suggesting a statement can be either right, which makes it a fact, or wrong, which means it is not a fact" (p. 44). For the purpose of cultural contextualisation, let us consider the so-called emic or "insider" perspective, and the so-called etic perspective of an objective "outsider" (Kim, 2012). Emic studies of cultural communication examined e.g. the cultural meaning of the word "communication" in some American speech (Katriel & Philipsen, 1990), and etic studies of cross-cultural communication such as e.g. Okabe's (1983) study of verbal messages focused on direct, explicit messages being more common in the United States of America (USA). Furthermore, Hollensen's (2011) contextual continuum in communication reveals North American inclination to low context and explicit messages (Figure 10) on the trajectory stretching from low to high context and explicit to implicit message.

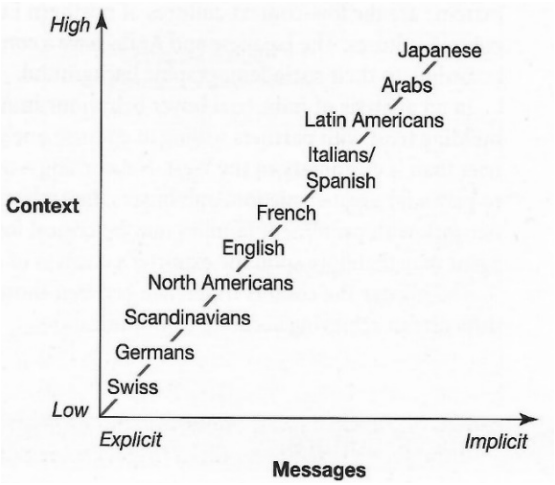


FIGURE 10: *A contextual continuum in communication: low/high context & explicit/implicit message*
Source: Hollensen (2011)

Thus, in the context of a US-centric approach to fact-checking pointed out by Haider & Sundin (2022) we would like to add that European fact-checking sites coexist with the North American ones. Examples include:
- Storyzy (n.d.) verifying quotes with the use of AI;
- United Kingdom-based Full Fact (n.d.) charity monitoring news related to primary concerns of citizens according to the established IPSON MORI Issues Index and cooperating with government departments; and

- Factmata project (Credibility Coalition, n.d.) assisting in detection and verification of media information.

In the context of the "infodemic" mentioned earlier, it is interesting to look at European citizens – their capacity to identify fake news and to check the frequency of fake news occurrence. In the Standard Eurobarometer surveys editions (European Commission, 2021; 2022; 2023), two-thirds *totally agree* or *tend to agree* that they often come across news or information that they believe misrepresent reality or are even false, thus results are stable within observed period (oscilation of 2 pp). Similarly, six in ten find it easy to identify news or information that they believe misrepresent reality or are even false in contrast with one-third of those who *tend to disagree* or *totally disagree*. When having a closer look at individual countries, 80% of Slovak respondents in the Standard Eurobarometer 98 (2023) edition *totally agree* that existence of news or information that misrepresent reality or is even false is a problem in the country. Even though the percentage in the case of Slovakia remains the same (80%) and it positions Slovakia above the EU average, when compared with the previous Standard Eurobarometer 96 (2022), the situation in the country has worsened regarding its rank: 9th in the EB98 instead of 13th in the EB96.

To improve media literacy, several initiatives addressed both to the general public and to higher education students have been launched in the Slovak Republic. Particularly in the context of audiovisual media, cooperation of the Creative Centre of the public broadcaster Rozhlas a televízia Slovenska with the education sector (e.g. the Faculty of Mass Media Communication at the University of Ss. Cyril and Methodius in Trnava, the Catholic University in Ružomberok) has been established. In the context of the European Digital Media Observatory, we wish to highlight the Central European Digital Media Observatory with eight partners and four subcontractors led by the Charles University (Czech Republic), including the international news agency Agence France-Presse (AFP), the University of Ss. Cyril and Methodius in Trnava (Slovakia) and the Kempelen Institute for Intelligent Technologies (KInIT, Slovakia). In synergy, the Czech team and the Slovak team initiated a comparative study analyzing educational projects on misinformation; addtionally, the KInIT team has developed an educational digital game called Factology Checker providing players with the opportunity to learn how to analyze and evaluate certain types of media news reports (*Communication from the Commission guidelines pursuant to Article 33a(3) of the audiovisual media services directive on the scope of Member States' reports concerning measures for the promotion and development of media literacy skills 2023/C 66/02*, 2023).

5 Conclusion

> Consider the task of baking bread. Data are like basic elements: atoms and molecules of starch, H_2O, bacteria of yeast, etc.; no trace of "bread" anywhere. Information is like ingredients: flour, sugar, water, spices; still no trace of the intended outcome (but one cannot make a beer out of it anymore). Having all such ingredients does not imply that a knowledge of how to make bread exists: one can still end up with a tasty crust, black cinder or gluey mush. Knowledge involves relations: recipes and their contextual interpretations. Further, having the know-how for making bread does not imply that one actually should make bread and why. Wisdom goes beyond knowledge because it allows comparisons (judgments) with regard to know-what and know-why. It is a long way from data to wisdom. (There is one additional step beyond wisdom: enlightenment – enriching the still value-free wisdom by the dimension of "truth".) (Zeleny, 1987, p. 59-60)

When approached with the question "What does media literacy have to do with intercultural dialogue?", Pérez Tornero (2014) reacts that "…media literacy deals with the study of cultures and looks at the problems relating to hybridization, interconnection and cross-cultural issues between societies and peoples. In other words, media literacy is all about intercultural dialogue" (p. 5).

Griswold in her *Cultures and Societies in a Changing World* (2004) states that in the European ethnic heritage that is of relevance also for a number of American institutions, bread connotes security, frugality, family – all in all life itself, adding that: "We further recognize that although bread may be ubiquitous in American kitchens, it is by no means universal. Human beings eat different grains in different places: Many Chinese depend on rice, Senegalese on millet, and Mexicans on corn" (Griswold, 2004, p. 15).

The know-what, know-why, and know-who considerations relate to knowledge structures, competencies and skills just like the flow of information-processing tasks in terms of the media literacy concept (Potter, 2005) oriented on cognitive structures that are employed when processing media content. As framed by Lundvall and Johnson (1994) cited by Tallinn University, the taxonomy of knowledge relates to:

- know-what (facts and feasibility of their analysis);
- know-why (knowledge about causality);
- know-how (skills or the capability: knowledge about who knows what and who knows to do what);
- know-who (social skills enabling cooperation and communication with co-workers and collaborators see also Merkel et al. (2024).

Thus, in the context of the taxonomy of knowledge by Zeleny (1987), bread as a "cultural object" (Griswold, 2004) is a "construct" built on "data" (elements: H_2O, yeast bacteria, starch molecules), "information" (ingredients: flour, sugar, water, spices, fixed recipe for bread only), "knowledge" (choose among different recipes for bread), and "wisdom" (Why bread and not croissant?). In doing so, Zeleny (1987) outlines a trajectory from "muddling through" (i.e. know-nothing), through efficiency (i.e. know-how) and effectiveness (i.e. know-what) to explicability (i.e. know-why).

In line with critical media literacy as an inquiry-based media literacy practice, NAMLE (n.d.-a) formulated media literacy concepts oriented on an effective media analysis as follows:

- Evidently, all media messages are constructed.
- It goes without saying that media messages are produced for particular purposes.
- Needless to say, all media messages contain values and points of view.
- By nature, people use their individual skills, beliefs as well as experiences to interpret their own meanings from media messages.
- By all means, media, just like media messages, can influence beliefs, attitudes and behaviors.

According to the European Union: "Large-scale disinformation campaigns are a major challenge for Europe and require a coordinated response from EU countries, EU institutions, online platforms, news media and EU citizens" (European Commission, n.d.-a, para. 3). Let us now summarise major findings arising from our awareness-mapping survey:

1. The questionnaire addressed primary sources and a press release when we inquired "which statements about press release students deliberate as false". Nearly one-half (48%) of the students view the statement that "a press release is similar to a product promotion or sales pitch" to be false, which is correct. The true statement that "a press release should provide key information, enabling a journalist to use it to produce their own article or report" appeared as the second least favoured option (18% of the total cohort, within which one-tenth of international respondents contrasts with one-quarter of Slovak respondents).

2. When asked "Which of the following is a secondary source of information?", over one-half of the total cohort of respondents correctly marked that it is an academic journal article commenting on someone else's scientific research; in this respect, international respondents (61%) outnumbered Slovak respondents (49%).
3. More than one-half of the students in total correctly indicated that the statement "a company pays a newspaper to place a link on the newspaper's website, linking to an article that directly or indirectly promotes the company's products and this should be labelled as such on the web page" is a "sponsored content". The second most frequently indicated, but incorrect, option ("a large advertisement for an airline next to a genuine newspaper article about the benefits of foreign travel") was confusing for the respondents to a different degree: its preference among Slovak students scored more than a double (30%) in comparison with answers of international students (14%).
4. Almost one-third of the respondents were familiar with the existence and function of The Wayback Machine as a tool for monitoring changes of Internet sites. More specifically, Slovak respondents with 21% represented roughly one-half of answers provided by international respondents.
5. In reaction to the question if "it is true that Spoke.com is well-respected fact-checking site", the mirror effect observed when comparing the cohort of Slovak respondents and the cohort of international respondents, provided that the spot-on identification of the fact-checking website is Snopes.com (not Spoke.com).
6. In the current 2022/23 edition, the preference of respondents shifted from the Politifact site to the Truth Facts site with mirror-effect score: three-fifths of respondents considered the (seemingly *nomen omen*) Truth Facts site to be a fact-checking site despite the fact that it is a humorous site.

With focus on critical thinking of education students in Slovakia, the research of Kosturková (2014, in Bodoríková et al. 2023) seeking an analogy with similar studies carried out in the Czech Republic and in the UK revealed that the UK students performed the best, followed by the Czech students, and Slovak students ranked third. Yet, the fact that the Czech students were students of management, and Slovakia was represented by education students, would not facilitate an adequate in-depth analysis. Still, based on her research results, Kosturková presents concise recommendations for the teaching practice of future educators, which Bodoríková et al. (2023) consider very stimulating for instruction of future teachers as well:

- Change the type of lectures and seminars from memorization (encyclopedic knowledge) to a masterclass (lectures in individual courses should be conducted in the form of metacognitive strategies, and in the framework of seminars, a series of tasks would be assigned to activate students);
- Assign analysis-oriented and problem-solving tasks;
- Provide room for communication and speech cultivation;
- Reinforce practical exercises aimed at organising and planning one's own workflow;
- Train flexibility in thinking (e.g. by asking questions);
- Encourage learning to accept constructive criticism;
- Reinforce training of personal development (patience, self-control, practical thinking...);
- In this context, higher education teachers are encouraged to design strategies and activities in a more systematic and thoughtful manner aimed at developing students' critical thinking in everyday teaching;
- In this context, higher education teachers are encouraged to link theory with practice in their teaching;
- In this context, higher education teachers are encouraged to support research and its analysis, which will reveal the reserves, shortcomings of the real status quo of critical thinking, and to explore other possibilities for effective education of future educators.

Resting on a combination of explicit knowledge (book smarts: know-what as facts, know-why as science, or know-who as communication), and implicit knowledge (street smarts: know-how), our recommendation advocates embeddedness of various aspects of critical thinking in the curriculum of the University of Economics in Bratislava where feasible or relevant. To conclude, embeddedness of explicit knowledge in the curriculum of the University of Economics in Bratislava has the potential to facilitate its upgrade in terms of continuous development of implicit knowledge.

Acknowledgement: The paper designed in terms of teaching skills development (in the framework of the SEDA Learning, Teaching and Assessing Award) results from the Erasmus+ project No. 2020-1-SK01-KA203-078299 Designing Holistic and Sustainable Educational Development to Improve Student Learning (HOSUED).
This study represents a research output of the KEGA project No. 003EU-4/2022 (2022-2023) "Content innovation of subject International Marketing in context of acceptance of latest trends in sustainable development and corporate social responsibility, as starting point for increasing their competitiveness in international business environment".

Appendix A: Selected core principles of media literacy education (MLE) by NAMLE

1. Expands the concept of literacy to include all forms of media and integrates multiple literacies in developing mindful media creators and consumers.
2. Envisions all individuals as capable learners who use existing knowledge, skills, beliefs, and experiences to create meaning from media experiences.

2.1 MLE teaches that all messages are constructed and prepares people to engage in critical analysis and reflection of these experiences.

2.5 MLE views media analysis as a process of evidence-based, open-ended exploration, rather than one through which single "correct" or pre-determined media interpretations are revealed.

3. Promotes teaching practices that prioritize curious, open-minded, and self-reflective inquiry while emphasizing reason, logic, and evidence.

3.1 MLE recognizes that how we teach matters as much as what we teach.

3.2 MLE uses co-learning and constructivist pedagogies in which teachers learn from learners and vice versa.

3.3 MLE asks learners to consider how emotions evoked through media experiences can be examined within frameworks of reason, evidence, logic, and metacognition.

3.4 MLE uses group discussion and analysis of media experiences to help learners understand and appreciate different perspectives and points of view.

4. Encourages learners to practice active inquiry, reflection, and critical thinking about the messages they experience, create, and share across the ever-evolving media landscape.

4.3 MLE teaches learners to ask questions that will enable them to gain a deeper and/or more sophisticated understanding of media experiences.

5. Necessitates ongoing skill-building opportunities for learners that are integrated, cross-curricular, interactive, and appropriate for age and developmental stage.

5.2 MLE involves an ever-evolving continuum of skills, knowledge, attitudes, and actions.

5.3 MLE provides learners with numerous and diverse opportunities to develop and practice skills of analysis and expression.

6. Supports the development of a participatory media culture in which individuals navigate myriad ethical responsibilities as they create and share media.

6.3 MLE helps learners develop mindful and healthy media habits in a media-saturated world.

7. Recognizes that media institutions are cultural institutions and commercial entities that function as agents of socialization, commerce, and change.
7.2 MLE acknowledges that all media messages contain values and points of view.
8. Affirms that a healthy media landscapes for the public good is a shared responsibility among media and technology companies, governments, and citizens.
8.2 MLE calls for educational institutions to facilitate educators' efforts by actively supporting critical thinking across learning experiences.
9. Emphasizes critical inquiry about media industries' roles in society, including how these industries influence, and are influenced by, systems of power, with implications for equity, inclusion, social justice, and sustainability.
9.2 MLE exposes learners to media that present diverse voices, perspectives, and communities.
9.3 MLE amplifies historically marginalized voices by including opportunities to examine cross-cultural media and international perspectives.

Source: NAMLE (n.d.-c)

Bibliography

Agence France-Presse. (n.d.-a). *About us.* https://www.afp.com/en/agency/about/about-us

Agence France-Presse. (n.d.-b). *Fact check site*. https://factcheck.afp.com

The Alexandria proclamation. (2006). In Garner, S. D. (Ed.), *High-level colloquium on information literacy and lifelong learning Bibliotheca Alexandrina, Alexandria, Egypt November 6-9, 2005* (p. 3-4). Bibliotheca Alexandrina. https://unesdoc.unesco.org/ark:/48223/pf0000144820

Azoulay, A. (2023a). *Global media and information literacy week 2023.* https://www.unesco.org/en/weeks/media-information-literacy

Azoulay, A. (2023b, October 31). *Message from Ms Audrey Azoulay, Director-General of UNESCO, on the occasion of Global Media and Information Literacy Week, 24-31 October 2023*. https://unesdoc.unesco.org/ark:/48223/pf0000387229_eng

Bawden, D. (2008). Origins and concepts of digital literacy. In Lankshear, C., & M. Knobel (Eds.), *Digital literacies: Concepts, policies and practices* (pp. 17-32). Peter Lang.

Belvončíková, E., & Čiderová, D. (2022a). Know-what, know-why, know-who... how do you get your facts right? In Novák, J., & L. Pasiar (Eds.), *Profesijný rozvoj učiteľov vysokých škôl ako nástroj podpory učenia sa študentov* [*Professional development of university teachers as a tool to support student learning*] (pp. 8-23). University of Economics.

Belvončíková, E., & Čiderová, D. (2022b). One literacy and multiple intelligences? The case of media literacy. *Media Literacy and Academic Research*, *5*(2), 54-70. https://www.mlar.sk/wp-content/uploads/2022/12/3_Eva-Belvonc%E2%95%A0ii%E2%95%A0ukova%E2%95%A0u_Denisa-C%E2%95%A0iiderova%E2%95%A0u-.pdf

Berger, G. (2019). Whither MIL: Thoughts for the road ahead. In Carlsson, U. (Ed.), *Understanding media and information literacy (MIL) in the digital age: A question of democracy* (pp. 25-35). University of Gothenburg.

Bloom, B. (1956). *Taxonomy of educational objectives: The classification of educational goals.* McKay.

Bodoríková, N., Petrová, G., & Tirpáková, A. (2023). *Kritické myslenie pohľadom učiteľov* [*Critical thinking through teachers' eyes*]. Wolters Kluwer.

Bulger, M., & Davison, P. (2018). The promises, challenges, and futures of media literacy. *Journal of Media Literacy Education*, *10*(1), 1-21. https://doi.org/10.23860/JMLE-2018-10-1-1

Cannon, M., Connolly, S., & Parry, R. (2020). Media literacy, curriculum and the rights of the child. *Discourse: Studies in the Cultural Politics of Education*, *43*(2), 322-334. https://doi.org/10.1080/01596306.2020.1829551

DiYanni, R. (2016). *Critical and creative thinking: A brief guide for teachers.* John Wiley & Sons.

Elmborg, J. (2006). Critical information literacy: Implications for instructional practice. *The Journal of Academic Librarianship*, *32*(2), 192-199. https://doi.org/10.1016/j.acalib.2005.12.004

Erasmus+ Project. (2015). *Learning guide on flipping the classroom in adult education*. European Union, European Commission. https://web.archive.org/web/20220120053530/http://projectiflip.eu/wp-content/uploads/2018/05/iFlip_IO7_Learning-Guide-in-FTC-in-Adult-Education_EN.pdf

Erstad, O., & Amdam, S. (2013). From protection to public participation. A review of research literature on media literacy. *Javnost – The Public, 20*(2), 83-98. https://www.tandfonline.com/doi/abs/10.1080/13183222.2013.11009115

European Commission. (n.d.-a). *Tackling online disinformation*. https://digital-strategy.ec.europa.eu/en/policies/online-disinformation

European Commission. (n.d.-b). *Media literacy*. https://digital-strategy.ec.europa.eu/en/policies/media-literacy

European Commission. (2021, April). *Standard Eurobarometer 94 (Winter 2020-2021). Media in use in the European Union.* Publications Office of the European Union. https://europa.eu/eurobarometer/api/deliverable/download/file?deliverableId=75896

European Commission. (2022, April). *Standard Eurobarometer 96 (Winter 2021-2022). Media use in the European Union.* Publications Office of the European Union. https://europa.eu/eurobarometer/api/deliverable/download/file?deliverableId=81899

European Commission. (2023, February). *Standard Eurobarometer 98 (Winter 2022-2023). Media use in the European Union.* Publications Office of the European Union. https://europa.eu/eurobarometer/api/deliverable/download/file?deliverableId=87397

European Commission. (2023, January 20). *Report on the 2022 European media literacy week*. Deutschland sicher im Netz e.V. (DsiN). https://digital-strategy.ec.europa.eu/en/library/report-2022-european-media-literacy-week

Credibility Coalition. (n.d.). *Factmata*. https://credibilitycoalition.org/credcatalog/project/factmata/

Full Fact. (n.d.). *Homepage*. https://fullfact.org/

Garud, R. (1997). On the distinction between know-how, know-why, and know-what. *Advances in Strategic Management*, 14, 81-101.

Global standards for media and information literacy curricula development guidelines. (n.d.). UNESCO. https://www.unesco.org/sites/default/files/medias/files/2022/02/Global%20Standards%20for%20Media%20and%20Information%20Literacy%20Curricula%20Development%20Guidelines_EN.pdf

Gordon, D. R. (1971). *The new literacy.* University of Toronto Press.

Graves, L., & Amazeen, M. A. (2019). Fact-checking as idea and practice in journalism. *Oxford Research Encyclopedia of Communication*. https://doi.org/10.1093/acrefore/9780190228613.013.808

Griswold, W. (2004). *Cultures and societies in a changing world* (2nd ed.). Pine Forge Press.

The Grünwald declaration on media education. (1983). *Educational Media International*, *20*(3), 26. https://doi.org/10.1080/09523988308549128

Haider, J., & Sundin, O. (2022). *Paradoxes of media and information literacy. The crisis of information.* Routledge.

Hollensen, S. (2011). *Global marketing: A decision-oriented approach.* Prentice Hall.

Johansson, V., & Limberg, L. (2017). Seeking critical literacies in information practices: Reconceptualising critical literacy as situated and tool-mediated enactments of meaning. *Information Research*, *22*(1), CoLIS paper 1611. http://InformationR.net/ir/22-1/colis/colis1611.html

Katriel, T., & Philipsen, G. (1990). "What we need is communication": "Communication" as a cultural category in some American speech. In Carbaugh, D. (Ed.), *Cultural communication and intercultural contact* (pp. 77-93). Lawrence Erlbaum Associates. https://doi.org/10.4324/9780203812259

Kim, Y. Y. (2012). Comparing intercultural communication. In Esser, F., & T. Hanitzsch (Eds.), *The handbook of comparative communication research* (pp. 119-133). Routledge.

Kosturková, M. (2016). *Kritické myslenie v edukačnej praxi na Slovensku* [*Critical thinking in education practice in Slovakia*]. Rokus.

van de Lagemaat, R. (2006). *Theory of knowledge for the IB diploma.* Cambridge University Press.

Limberg, L., Sundin, O., & Talja, S. (2012). Three theoretical perspectives on information literacy. *Human IT: Journal for Information Technology Studies as a Human Science*, *11*(2), 93-130. https://humanit.hb.se/article/view/69/51

Little, H. B. (2018). Media literacy: A moving target. *Knowledge Quest, 47*(1), 16-23. https://eric.ed.gov/?id=EJ1190639

Livingstone, S., Van Couvering, E., & Thumin, N. (2008). Converging traditions of research on media and information literacies: Disciplinary, critical, and methodological issues. In Coiro, J., Knobel, M., Lankshear, C., & D. J. Leu (Eds.), *Handbook of research on new literacies* (pp. 103-132). Routledge.

Livingstone, S. (2018, July 27). *Media literacy – everyone's favourite solution to the problems of regulation.* https://blogs.lse.ac.uk/parenting4digitalfuture/2018/07/27/media-literacy-problems-of-regulation/

Markman, A. (2012, May 3). Do you know what you don't know? *Harward Business Review*. https://hbr.org/2012/05/discover-what-you-need-to-know

Merkel, J., Belvončíková, E., & Zhurbas-Litvin, V. (2024). Caring practices in and beyond coworking spaces. In Mariotti, I., Tomaz, E., Micek, G., & C. Méndez-Ortega (Eds.), *Evolution of new working spaces* (pp. 59-70). Springer Cham. https://doi.org/10.1007/978-3-031-50868-4_6

Merriam-Webster. (n.d.). *Know better idiom*. Retrieved April 5, 2024, from https://www.merriam-webster.com/dictionary/know%20better

NAMLE. (n.d.-a). *Core principles of media literacy education glossary of terms.* https://namle.org/resources/core-principles/core-principles-glossary-of-terms/

NAMLE. (n.d.-b). *Key questions to ask when analyzing media experiences.* https://namle.org/resources/key-questions-for-analyzing-media/

NAMLE. (n.d.-c). *Core principles of media literacy education.* https://namle.org/resources/core-principles/

Novotná, E., & Petrasová, A. (2021). *Critical thinking in undergraduate teacher training. Critical thinking as a determinant of individualized and differentiated teaching*. Lambert Academic Publishing.

Okabe, R. (1983). Cultural assumptions of East and West: Japan and the United States. In Gudykunst, W. B. (Ed.), *Intercultural communication theory: Current perspectives* (pp. 21-44). Sage Publications.

Paris agenda or 12 recommendations for media education. (2007, June 21-22). https://www.diplomatie.gouv.fr/IMG/pdf/Parisagendafin_en.pdf

Pérez Tornero, J. M. P. (2014). Media literacy: The cultural heritage of our time. In Pérez Tornero, J. M. (Ed.), *Media literacy and intercultural dialogue: Strategies, debates and good practices* (p. 5). https://www.gabinetecomunicacionyeducacion.com/sites/default/files/field/adjuntos/libro.pdf

Potter, W. J. (2005). *Media literacy* (3rd ed.). Sage Publications.

Potter, W. J. (2013). Review of literature on media literacy. *Sociology Compass*, *7*(6), 417-435. https://doi.org/10.1111/soc4.12041

Simon, F. M. (2024, February 6). Artificial intelligence in the news: How AI retools, rationalizes, and reshapes journalism and the public arena. *Columbia Journalism Review*. https://www.cjr.org/tow_center_reports/artificial-intelligence-in-the-news.php

Søe, S. O. (2018). Algorithmic detection of misinformation and disinformation: Gricean perspectives. *Journal of Documentation*, *74*(2), 309-332. https://doi.org/10.1108/JD-05-2017-0075

Staněk, P., Mařík, V., Doliak, D., & Ondrovič, A. (2019). *Fakty a mýty o spoločnosti 5.0* [*Facts and myths about society 5.0*]. Wolters Kluwer.

Starbird, K., Arif, A., & Wilson, T. (2019). Disinformation as collaborative work: Surfacing the participatory nature of strategic information operations. *Proceedings of the ACM on Human-Computer Interaction, 3*(127), 1-26. https://doi.org/10.1145/3359229

Storyzy. (n.d.). *Disinformation tracking.* https://storyzy.com/

Sundin, O. (2008). Negotiations on information-seeking expertise: A study of web-based tutorials for information literacy. *Journal of Documentation*, *64*(1), 24-44. https://doi.org/10.1108/00220410810844141

Švec, Š. (1998). *Metodológia vied o výchove* [*Methodology of educational sciences*]. Iris.

Tallinn University. (n.d.). *Key concepts in information and knowledge management*. https://www.tlu.ee/~sirvir/Information%20and%20Knowledge%20Management/Key_Concepts_of_IKM/other_knowledge_typologies.html

Tuominen, K., Savolainen, R., & Talja, S. (2005). Information literacy as a sociotechnical practice. *The Library Quarterly*, *75*(3), 329-345. https://doi.org/10.1086/497311

Wardle, C., & Derakhshan, H. (2017). *Information disorder: Toward an interdisciplinary framework for research and policymaking.* Council of Europe. https://rm.coe.int/information-disorder-toward-an-interdisciplinary-framework-for-researc/168076277c

Wilson, C., Grizzle, A., Tuazon, R., Akyempong, K., & Cheung C.-K. (2011). *Media and information literacy: Curriculum for teachers*. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000192971

World Economic Forum. (2024, January 10). *The global risks report 2024* (19th ed.). World Economic Forum. https://www.weforum.org/publications/global-risks-report-2024/

Zeleny, M. (1987). Management support systems: Towards integrated knowledge management. *Human Systems Management*, *7*(1), 59-70. https://doi.org/10.3233/HSM-1987-7108

Authors

Assoc. Prof. Ing. Denisa Čiderová, PhD., M.A.

University of Economics in Bratislava
Faculty of Commerce
Dolnozemská cesta 1,
852 35 Bratislava
SLOVAK REPUBLIC
denisa.ciderova@euba.sk
ORCID ID: 0000-0002-0046-1451

Graduate of the University of Leicester (United Kingdom of Great Britain and Northern Ireland), the Matej Bel University in Banská Bystrica, and the University of Economics in Bratislava, Denisa Čiderová has been acknowledged by the Staff and Educational Development Association (SEDA, United Kingdom of Great Britain and Northern Ireland) as SEDA Recognised Teacher. Affiliated with the Faculty of Commerce, the University of Economics in Bratislava, her academic focus on inter-/cross-cultural issues dates back to her active involvement in thematic workshops/training as well as teaching, both across the Slovak Republic and abroad. Recent engagements of Denisa Čiderová with the inter-/cross-cultural theme relate to her scholarly (multiculturalism) research-oriented tutorship of a scholarship holder from the Marmara University (Istanbul, Turkey) in terms of the National Scholarship Programme of the Slovak Republic, as well as academic interaction with Cross-Cultural focus and the "Global Village" event at the IMT-BS Grande École in Évry, France, in 2023.

Ing. Eva Belvončíková, M.A., PhD.

University of Economics in Bratislava
Faculty of Economics and Finance
Dolnozemská cesta 1,
852 35 Bratislava
SLOVAK REPUBLIC
eva.belvoncikova@euba.sk
ORCID ID: 0000-0002-6746-1341

Graduate of the University of Sussex in Brighton (United Kingdom of Great Britain and Northern Ireland), the Matej Bel University in Banská Bystrica (Slovak Republic), and the University of Economics in Bratislava (Slovak Republic), Eva Belvončíková has been acknowledged by the Staff and Educational Development Association (SEDA, United Kingdom of Great Britain and Northern Ireland) as SEDA Recognised Teacher. Eva Belvončíková works as a researcher at the Faculty of Economics and Finance, the University of Economics in Bratislava. Her research focus is on cultural and creative industries and their location, actors and institutions. Within this area, she recently engages with coworking spaces in Slovakia and Europe, the impact of COVID-19 on their operation and the well-being of actors in coworking spaces. Eva Belvončíková also studies chosen aspects of education, mainly decision-making processes within education and knowledge spillovers from universities.