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STUDENTS IN POLAND IN THE FACE OF THE FAKE NEWS PHENOMENON IN THE CONTEXT OF THE WAR IN UKRAINE

ABSTRACT: The article addresses the proliferation of “fake news” or “disinformation” in the context of the war in Ukraine that began on February 24, 2022, with Russia as the aggressor. While the conflict has been widely covered by both public and private media globally, the certainty of the reported information’s credibility is in question. Fake news is characterized as false or misleading reports on websites or fabricated stories intended for various purposes. The study examines how Polish students acquire information regarding the war in Ukraine via the Internet, with an emphasis on the issue of fake news. This research revolves around twelve survey questions (online) covering aspects such as information-seeking behaviours, source credibility, and fake news verification techniques. The communicative approach was employed in the study, using seven categories to affirm the credibility of information. While the sample presents a snapshot of the student population’s views, it’s not fully representative of all students in Poland. The research provides an overview of the students’ online information consumption habits in the context of the war in Ukraine. There is clear indication of the dominance of digital platforms, especially social networks, in information dissemination. While students demonstrate some level of discernment by considering authorship and source credibility, the reliance on potentially unreliable platforms and a lack of enthusiasm for training to identify fake news pose concerns. Addressing these concerns would require educational institutions to emphasize the importance of digital literacy. Finally, a set of hypotheses useful in further research is proposed.

KEYWORDS: Ukraine, war, fake news, disinformation, students, adult education, geo-pedagogical perspective.

“At the moment, approximately 10,000 fake accounts have appeared to discourage Poles from helping Ukrainians” (Dzieciuchowicz, 2022)

“Lavrov called the genocide of #Ukrainians in #Bucha staged” (Nexta, 2022)

Introduction

On February 24, 2022, the war in Ukraine began, in which the Russian Federation was the aggressor. Since then, both public and private media have regularly reported not only what is happening at the front but also the activities of all political forces from around the world.

Information about the war in Ukraine comes from various types of media or from other people. However, there is no certainty that all credibly presented information is true. An example may be the statement of Russian Foreign Minister Sergey Viktorovich

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Lavrov at a press conference in Antalya, Turkey, on March 10, 2022. The minister reassuringly said that Russia had not attacked Ukraine, and Western countries, who were behaving dangerously, had been causing tension in the region for years.

In the face of the war in Ukraine, the expression “fake news”, deemed by the authors of the Collins Dictionary as the word of the year 2017, began to take on a special meaning. A sharp increase in fake news about the war in Ukraine and refugees means it is difficult for many people to verify what is reported (EDMO, 2022).

Fake news is defined as “false reports of events, written and read on websites” (Oxford Advanced Learner’s Dictionary, 2022) or “false news stories, often of a sensational nature, created to be widely shared or distributed for the purpose of generating revenue, or promoting or discrediting a public figure, political movement, company, etc.” (Dictionary.com, 2022).

Katarzyna Bąkowicz points out the necessity to understand the phenomenon of fake news in two contexts: a narrow one – when we refer to information whose veracity and source can be verified, and a broad one – by which she means a whole set of practices aimed at disinformation. This is a phenomenon that goes far beyond the boundaries of a single discipline or area of social life (Bąkowicz, 2019: 282). The author indicates that, drawing on various classifications, the following characteristic types can be distinguished (though this is not an exhaustive list): satire or parody, false connection of image with content, fabricated, misleading, manipulated or imposter content, false context, information created by a political entity (propaganda), and advertising materials in the form of news (Bąkowicz, 2019: 285-286).

As an EU citizen, I note that the nomenclature of the European Union uses the term “disinformation”, which is synonymous with “fake news”. “Disinformation” is defined as “verifiably false or misleading information” that, cumulatively, (a) “is created, presented and disseminated for economic gain or to intentionally deceive the public”; and (b) “may cause public harm”, intended as “threats to democratic political and policymaking processes as well as public goods such as the protection of EU citizens’ health, the environment or security” (Code of Practice on Disinformation, 2018: 1).

An important element of the definition is to indicate that I am also operating in the sphere of the Internet, where not everything is stated *expressis verbis*, and where there is no indication as to who the sender of the information is, who the sender may be, whether a private person or an institution, as in the case of the Ministry of Defence of the Russian Federation, which creates an alternative reality on its YouTube channel. At the turn of February and March 2022, Russian propaganda “informed us” in the following ways: “1) The Russian army is conducting a special operation to denazify Ukraine, liberating Kharkiv, Mariupol, and Nikolaev from the Nazi battalions, 2) the operation is proceeding as planned and would have been successfully completed long

ago if the Nazi fighters had not taken civilians hostage, and 3) Ukrainians blow up housing buildings and hospitals with Ukrainian women and children inside to accuse the Russian army of everything, 4) in secret laboratories in Ukraine, the Americans created combat strains of the coronavirus that attacked only Russians and were spread by migratory birds. In addition, in general, Ukraine is only a battlefield between Russia and the USA, where the fate of the future world order is being decided” (Glukhovskiy, 2022, own translation). Fake news is the inability to recognise false or distorted information (Gorwa, 2017: 6-7).

Literature review

Reflections on fake news or disinformation are important because the knowledge of modern people increasingly comes from sources other than schools or universities (Bell et al., 2009; Eurostat, 2020). Additionally, as humanity, we are dealing in the short term with two phenomena that have wide repercussions in many dimensions. The first was the COVID-19 pandemic, and the second is the war in Ukraine. Both phenomena, despite the various territorial ranges owing to globalisation processes, the involvement of the NATO alliance, and the resolution condemning Russian aggression adopted by the United Nations, have gained global importance.

Observing the helplessness of both scientists and those in power looking for new ways and explanations for describing events in Ukraine favours the dissemination of information in an alternative way beyond the channels previously considered mainstream (television, radio, newspapers). Conspiracy theories distributed via the Internet are flourishing, spreading like a plague (Kucharski, 2016; 2021), and war, as Marshall McLuhan wrote, is also taking place in the sphere of information (McLuhan, 2015: 66). The scale of the phenomenon is wide. Only in 2020 there were “1,175 articles with false and misleading content from 102 media outlets in the Baltic States and in Poland in English, Estonian, Latvian, Lithuanian, Polish, and Russian languages. The articles had a potential reach of 226 million contacts” (DebunkeU, 2020).

Over the past few years, the phenomenon of fake news has been repeatedly analysed in the academic literature. In the public sphere, the phenomenon of fake news was widely described by, among others, the Finnish journalist Jessikka Aro, who herself became a victim of this phenomenon only because she dealt with it in a methodical and diligent manner (Aro, 2021). The facts she described illustrate and confirm the destructive impact on the functioning of democracy (McGonagle, 2017). It is also of interest to filmmakers (Pool, 2018; Rossi, 2020; Truffaut, 2021). Texts on this subject have appeared in reputable newspapers such as *The Guardian*, *The New York Times*, *The Washington Post*, *Die Welt*, *El Pais*, etc. (which can be easily traced thanks to the Google

search engine). The scale of the analysed phenomenon can be read in numerous reports (Jwa et al., 2019; Rashkin et al., 2017; Singhal et al., 2019; Monti et al., 2019; Shu et al., 2017; Shu, Wang & Liu, 2019; Roozenbeek & Van Der Linden, 2019; Zellers et al., 2019; Bondielli & Marcelloni, 2019; Pérez-Rosas et al., 2017; Wardle & Derakhshan, 2017) with regard to COVID-19 (Luengo & García-Marín, 2020; Gupta et al., 2022; Apuke & Omar, 2021). The spread of fake news is also mentioned in EU reports (European Commission, 2020; 2021; 2022a). In accordance with The Strengthened Code of Practice on Disinformation from 2022, fake news is indicated, among others: ensuring transparency of political advertising, recognizing user rights, cooperation of fact-checking entities, and also allowing scientists access to data (European Commission, 2022c).

Posing these problems corresponds to the basic assumptions of adult education, *i.e.* reference to experience, preference for independent decision-making about one's education, focus on specific applications and practicality, a problem-based approach to learning, which should result in professionalism in the field of adult education, including creating courses or training oriented towards the problem of fake news (Foley ed., 1999; Jarvis, 1995; Merriam & Cunningham, 1989; Rubenson, 2011). It is also essential to recognize the threats arising from the development of artificial intelligence and the ability to create images and videos (Botha & Pieterse, 2020).

Hence, it seems appropriate to formulate a diagnosis that could serve as a guideline when designing appropriate educational activities related to the problem of fake news. The volume of available digital information means that to determine its usefulness for the recipient, it is vital to adopt criteria for assessing its credibility (Bukowski & Feliks, 2015; Dong et al., 2015; Metzger, Flanagin & Medders, 2010; Miller, 1996).

Research methodology

If we accept the proposition that information is the basic value/commodity of the network society (Castells, 2010) that exists under conditions of continuous liquidity (Bauman, 2017), it is necessary to reflect on its dissemination. In this particular case, I analyse it by researching the opinions of Polish students who search on the Internet for information about the war in Ukraine. Reversing the perspective, I ask how the students learn about the world via the Internet in the context of the war in Ukraine.

Thus, when I ask for opinions, I am asking about this: how do students gain knowledge about the war in Ukraine on the Internet? As I am interested in the issue of fake news, this gives rise to specific research consequences, hence the following questions that were asked via the research tool in the form of an online survey questionnaire:

1. Are you looking for information on the war in Ukraine on the Internet?
2. How often do you search for information about the war in Ukraine?

3. Do you pay attention to the author of the information posted on the Internet?
4. What, in your opinion, determines the credibility of information on the Internet? (up to 3 answers)
5. Which internet sources do you use to obtain information about the war in Ukraine? (multiple choice)
6. What, in your opinion, determines the credibility of the author of information on the Internet? (multiple choice)
7. Do you check the accuracy of the information from the websites you use?
8. Do you compare the information obtained from different Internet sources?
9. What tools do you use to verify information on the Internet? (multiple choice)
10. Do you verify the information obtained on the Internet by talking to your Ukrainian/ Ukrainian friends?
11. Would you be interested in participating in a free training on fake news?
12. What devices do you use to obtain information? (multiple choice)

The variety of approaches prompts us to refine the search. In the context of fake news, I focus research on the communicative approach (Dervin, 2011), and to confirm the credibility of information, I propose seven categories:

- a) knowledge about the author – using the answer to question 3;
- b) knowledge about the source – using the answer to question 5;
- c) knowledge about the website – using the answer to question 11;
- d) information from various sources – using the answer to question 8 and 9;
- e) information from an expert – using the answer to question 6 and 10;
- f) the use of fake news verification tools – using the answer to question 12;
- g) critical attitude to information – using the answer to question 4 and 7.

The research was conducted among students in Poland in the period from March 14, 2022 (19th day of the war in Ukraine) to April 10, 2022 (46th day of the war in Ukraine)¹. Participating students were recruited in four ways. The first group consists of students of the Institute of Pedagogy of the University of Szczecin, with whom I work as academic teachers. Another comprises students of other departments and institutes of the University of Szczecin and other higher education institutions in Szczecin, with whom I established direct contact at the university, explaining the subject of research to them. The third category of respondents is made up of people I have found through various types of *fanpages* on Facebook. The categories that were searched for included university, academy, university of technology, students (first years, students of mathematics, Polish studies, history), bachelor's degree, student self-government, *etc.*, and requests were sent to complete the questionnaire via approximately 80 *fanpages*. The

¹ There were no sources of financing for research.

fourth group is the students I have found using the reach purchased on Facebook. I am unable to provide the number of responses obtained from a particular group. The sample selection was not deliberate. Given the lack of representativeness of the results obtained, the analytical part below presents only the analysis of the frequency of response distributions. Therefore, the results presented here are for illustrative purposes only.

I received a total of 1,032 responses. Respondents were as follows: women 61.7%, men 34.7%, others 1.7% and 2% preferred not to answer the question about their gender. A total of 28.5% of them were studying in the first year, 20.1% in the second year, 15.8% in the third year, 14.8% in the fourth year (or the first year of the master's course), 18.2% in the fifth year (or the second year of the master's course), and 2.7% were PhD students. A total of 85.2% of them attended an intramural course, while 14.8% attended an extramural course. Of these, 26.7% work professionally, 26.5% work casually, and 46.8% do not work. Thus, it is a group that is representative of the student population to a limited extent because the latest available statistical data indicate that in the 2020/21 academic year, out of the total number of 1,215,307 students in Poland, women accounted for 58.0% of students, while 65.6% of students took intramural courses (GUS, 2021).

The paradigm for interpreting the results is dictated by my worldview on the events in Ukraine. By creating the questionnaire and undertaking the interpretation of its results, I approach the propaganda disseminated by the Russian Federation in a very critical way. I assume that it produces or supports the production of fake news. I unequivocally stand on the side of Ukraine. I understand that this may ultimately lead to a distorted answer to the questions posed. As a person who was and still is in direct contact with Ukrainian refugees and as a resident of a country that borders the conflict zone, I am unable to mentally distance myself from the situation that has arisen.

Analysis of the research results

The constant process of human cognition makes having information a condition for a better and safer existence (Ciborowski, 2005: 23-24.). The first question addressed to the students was the question of how to decide about their further participation in the study. The question: "Are you looking for information on the war in Ukraine on the Internet?" was answered affirmatively by 89.9% of male and female students, and only 10.1% answered negatively.

On the other hand, the frequency of searches for information on the Internet about the war in Ukraine shows the scale of potential exposure to fake news. In fact, 42.3% of the respondents stated that they look for information several times every day, 20.4% every day, but only once, 23.8% several times a week, 11.2% less often, and 2.3% said that they looked for information at a different frequency.

a) Knowledge about the author

In the digital world, the credibility of the message has gained an advantage over the “source authority”. The reason for this can be seen in the more difficult-to-define features of the authority, which, owing to the significant limitations of the digital environment, may no longer be the leading factors of credibility. However, information, even in the digital world, is not located in a vacuum. I decided to ask about the author(s) of the information posted on the internet. Therefore, I asked for an answer to the following question: “Do you pay attention to the author of the information posted on the Internet?”. In Table 1, I have provided the answers.

Table 1. Attention to the author of the information posted on the Internet

Response	Percentage
Always pay attention	50.2
Often pay attention	26.4
Sometimes pay attention	9.7
It is not important to me when the information is posted on a known site	9.1
I do not pay any attention to it	4.2
I do not know	0.5

Source: own research.

Thus, a majority of respondents (76.6%) either always or often pay attention to the authorship of the information they find on the Internet.

b) Knowledge of the source

The evolution of the Internet towards the 2.0 standard meant that it could be considered an instant communication channel, but the transition to the 3.0 network, referred to as the semantic network, or the third-generation network, made the recording of information available, not only for people, but also for computers (Ford, 2017). Therefore, the next questions concerned the source of information.

Due to the four different categories of information sources mentioned: Social Networks, Internet Information Portals, Digital Newspapers, and Radio Station websites, the data are divided into four tables.

Table 2. Social Networks

Source	%
Facebook	50.4
YouTube	37.4
Twitter	28.4
TikTok	13.7
Podcasts	12.6

Source: own research.

Table 3. Internet Information Portals

Source	%
Onet	31.1
TVN	27.9
WP	25.7
BBC	16.9
Google news	16.9
Polsat	12.9
TVP	12.9
Interia	12.7
CNN website	11.6
naTemat	4.4

Source: own research.

Table 4. Digital Newspapers

Source	%
Wyborcza.pl	12.6
Gazeta.pl	8.5
Polityka	6.2

Source: own research.

Table 5. Radio Station Websites

Source	%
Radio Zet	7.5
Polish Radio	3.2
Tokfm	1.8

Source: own research.

The students' choices indicate the primacy of new media over traditional media – the website of the largest Polish private television comes only fifth. The website of the largest Polish newspaper (Gazeta Wyborcza) scored only 12.6%, and the Polish public radio scored 3.2%. The domination of social media, in which the credibility of information is difficult to verify shows a potential threat of fake news. Disinformation has more potential to spread here.

c) Knowledge of the website

When using web resources, digital competences that make it possible to evaluate individual websites are of key importance. Therefore, I asked the students if they would like to participate in free training on recognition of fake news. In Table 6, I have provided the answers.

Table 6. To be interested in participating in free training on fake news

Response	%
Yes	28.8
No	33.5
Maybe	37.7

Source: own research.

Let us recall here that we are basically at war with the Russian Federation, and the overwhelming majority of the respondents declare that they either do not want to learn how to defend themselves or are hesitant about it, so there is relatively low level of interest among students regarding training on discerning fake news.

d) Information from different sources

When we have information on the Internet about groundbreaking academic research that has just been published, it seems obvious that this information is confirmed in several different sources. The war in Ukraine was not obvious and came as a surprise at the same time, so I asked the students whether they compared the information obtained from various Internet sources. In Table 7, I have provided the answers.

Table 7. Comparing the obtained information in different Internet sources

Response	%
Yes, always	38.8
Yes, sometimes	51.1
I do not verify it. I believe it is true	5.8
I do not verify it. I do not really care about that	4.4

Source: own research.

This represents the students' habits when it comes to verifying the information they obtain from the internet. The Internet, as a source of knowledge for almost 90%, can be treated as a kind of monopoly.

In the next section, I asked what tools the students use to verify information on the Internet. As many as 70.9% admitted that they do not use any tools. The students – who had the option of multiple choice in this question – indicated the following tools (Table 8):

Table 8. Tools to verify information on the Internet

Tool	%
No tools used	70.9
FactCheck	10.3
Fake News Detector	13.8
Crosscheck	7.5
Demagog	0.8
FakeHunter	0.3

Source: own research.

From these tables, we can see the students' approach to verifying information and their awareness of and trust in different tools available for this purpose.

Students are likely to be cautious about accepting information as reliable when it appears in only one source. However, the repeated appearance of a given piece of information on various websites does not prove its credibility in itself. It often happens that the same information is repeated by many senders. Using only social networking sites, we are at risk of reaching duplicated information that is untrue. Therefore, it would be advisable for those seeking information to take into account not only the quantity but also the quality of the sources providing the information. Additional analyses show that in the group of students who do not use any tools, only 26.6% declare their willingness to participate in free training, while 35.2% do not. As we can see, it basically does not matter whether the respondents use the tool (if they know it) or not (and maybe they do not know about it). The willingness to learn (for free) or the lack of it probably does not result from the state of knowledge, but perhaps from laziness and ignorance of the threat we are in.

e) Information from an expert

An ideal solution for verifying information would be to refer to an expert in a given field. For 94.2% of the respondents, the author's credibility depends on whether he or she is an expert (answer to question 6). This is a positive result. Students are open to using expert knowledge. Thanks to an expert, it is possible to quickly resolve doubts and obtain reliable information instantly when needed. Employees of government institutions, research units, and many other professionals could be helpful in this regard. Unfortunately, the comfort/possibility of comparing information found in digital media with authorities on a given topic is very limited and in many topics unattainable.

Owing to the number of Ukrainian refugees in Poland, whom we can treat as experts, I decided to check if the students verify the information obtained on the Internet by talking to their Ukrainian friends. In Table 9, I have provided the answers.

Table 9. Students' verification habits using Ukrainian friends as sources

Response	%
Yes, always	11.2
Yes, often	21.5
Yes, rarely	19.3
No	48.0

Source: own research.

This table shows that, despite acknowledging the importance of expert knowledge, a significant portion of students do not take advantage of their Ukrainian acquaintances as a source of reliable information on the matter.

f) Use of fake news verification tools

To obtain reliable information, what is important is not only who transmits the message and from what source, but also what programs the recipient uses to verify the information. The website address enables additional verification of the accuracy of information. Projects such as Crosscheck, Fake News Detector, or FactCheck make it possible for us to verify (at least to some extent) whether the information we see is true (remember, 70.9% of the respondents do not use any of them). Therefore, in study, I also asked which device was most often used by the students. In Table 10, I have provided the answers.

Table 10. Devices Used by Students to Obtain Information

Device	%
Smartphones	96.0
Laptops	66.0
Desktops	22.2
Tablets	8.1

Source: own research.

Owing to the lower functionality of smartphones (20% of the respondents use only smartphones to obtain information) than is the case of other devices when searching for information, this is important. We do not know, however, what are the time proportions in the use of individual devices. However, in this matter, the smartphone seems to be the most available option, and thus, it can be argued that it is used most often. This could influence the thoroughness with which information is verified or consumed.

g) Critical attitude to information

We accept information that corresponds to private credibility criteria. Therefore, I asked the students the following question: "In your opinion, what does the credibility of

information on the Internet depend on?”, asking them to choose a maximum of 3 answers that are most important to them. A total of 1,011 respondents indicated a total of 2,810 responses. In Table 11, I have provided the answers.

Table 11. Criteria for Credibility of Information on the Internet (up to 3 answers)

Criteria	Percentage
Who communicates the information (his/her competence in a given field)	84.5
Whether I can check it	57.5
Where the information is posted (generally accessible vs. accessible only to selected few)	50.0
From how the information is communicated (whether clear, understandable language is used)	39.4
From the attitude of the person informing me to other people (negative, kind or indifferent)	24.6
Whether it is consistent with my previous knowledge	19.6

Source: own research.

The table underscores the importance students place on the source’s competence, verifiability, and the location (platform) where the information is shared when determining its credibility. What is, therefore, important for students is who communicates the message and its address (on the internet) so that the accuracy of the information can be verified.

In answer to the question “Do you verify the accuracy of the information from the websites you use?”, I found the following responses (Table 12):

Table 12. Checking the accuracy of the information from the websites

Response	Percentage
Yes, always	29.8
Yes, sometimes	55.1
I do not verify it. I believe it is real	11.2
I do not verify it. I do not really care about that	3.9

Source: own research.

In view of the answers to the previous questions and the granting, en masse, of credibility to experts, it is possible to conclude that the students to a large extent feel released from the obligation to constantly verify information, as only 29.8% of them declare that they always check the truthfulness of information. One can imagine a situation where a specific person will be created as an expert in the network and viewers will feel released from the obligation to verify the information. As already mentioned, this raises concerns about the potential danger of blindly trusting online experts and the risks associated with not verifying information. This underscores the importance

of media literacy and the dangers of relying too heavily on perceived experts without fact-checking.

Discussion

Bearing in mind the fact that due to the lack of representativeness of the obtained results the analysis presents only the analysis of the frequency of response distributions, and therefore, the presented results are for illustrative purposes only, I propose the following observations:

- In the digital age, the credibility of the message seems to have taken precedence over the authority of the source;
- Despite this shift, a majority of respondents (76.6%) still pay attention to the authorship of the information they find on the internet;
- Only half of the respondents consistently focus on the authorship, which could make them susceptible to misinformation;
- Social media platforms like Facebook and YouTube are primary sources of information for students, even surpassing traditional news portals;
- Traditional media platforms like newspapers and radio station websites lag significantly behind in terms of popularity;
- The dominance of social media, where information credibility can be questionable, indicates the potential risk of fake news propagation;
- Most students have a habit of verifying the information they obtain by comparing it across different sources. However, the reliability of the sources themselves can be questionable, especially if they just replicate the same piece of misinformation;
- A significant majority (70.9%) of students don't use any tools to verify the information they consume. Among those who do, the usage of specific tools varies, indicating a lack of standardization or awareness regarding verification methods;
- While students acknowledge the value of expert opinions, nearly half don't utilize their acquaintances, such as Ukrainian friends, as a source of information on the war in Ukraine;
- The majority of students use smartphones to obtain information, which might have limitations when it comes to in-depth research or verification compared to other devices like laptops or desktops;
- Students primarily gauge the credibility of online information based on the communicator's competence, the ability to verify the information, and where the information is posted.

In summary, while students recognize the importance of credible sources and often attempt to verify information, there are gaps in their approach. The high reliance on

social media, the lack of usage of verification tools, and the predominant use of smart-phones may make them susceptible to misinformation. There is a significant need for awareness campaigns, training, and tools that can help students and the general public critically evaluate and verify the information they encounter online.

We learn from the media that cyber elves engage in combatting Putin's trolls by fighting fake news and in this way help Ukrainian soldiers defeat Russian soldiers, who are called orcs (Dzieciuchowicz, 2022; Klečková, 2022). The war in Ukraine is also presented on the web in this way, while the activity of volunteers is important, if only because the Cyberspace Defence Forces were established in Poland on February 8, 2022 (MON, 2022).

Numerous initiatives are undertaken in the European Union to prevent the spread of fake news (disinformation) (European Commission, 2022b). Nevertheless, as research shows, in the process of searching the Internet for information about the war in Ukraine, Polish students use the proposed tools only to a limited extent. This may lead to the conclusion that this group is at risk of infection with the infodemic. It is also significant for these considerations to recognise that laziness, to a greater extent than bias, promotes susceptibility to fake news (Pennycook & Rand, 2018). From the conducted research, it can be concluded that Polish students only to a limited extent follow the guidelines of the CRAAP test, referring to: currency, relevance and authority of the information, the accuracy, truthfulness, and correctness of the content, and the purpose the information exists (Central Michigan University).

In view of the opinions obtained from the students, it seems necessary to develop the skills for verifying information and separating real from fake news as early as possible.

I emphasise that, on the one hand, it is advisable to be cautious in accepting information as credible when it appears only in one source. On the other hand, the repeated appearance of a piece of information on different websites does not prove its credibility in itself. It often happens that the same false information, intentionally or not, is repeated by multiple senders. Therefore, not only the quantity but also the quality of the sources providing information should be taken into account.

Conclusion

A solution to the problem of fake news may be the adoption of a geopedagogical point of view: this is the understanding that according to specific geographic conditions, a specific pedagogy is necessary, in our Polish case aimed at building up immunity to Russian propaganda. This is not a new concept. Paul F. Thomas wrote about it in 1993 in the Ukrainian context, pointing out: "If Ukraine is a treasure-trove of natural resources, it also constitutes a pedagogical gold mine for classroom teachers who can

find therein examples for critical analysis of almost every conceivable fallacy under the canopy of heaven – from the armamentarium of fallacies wilfully fabricated by the former Communist Party of the Soviet Union and as archived in documents readily available in the West” (Thomas, 1993: 49), emphasising the primacy of geography over history in relation to education (Thomas, 1993: 35). Thomas notes, “it [Ukraine] has the potential of becoming a major killing field of World War III” (Thomas, 1993: 24). The geopedagogical perspective, characterised by sensitivity to what is local (and therefore important), with the understanding that cyberspace is also a space for social interactions (*vide* the metaverse project), may be decisive for our independence.

In its 2018 communication, the European Commission recommends transparency, diversity, and credibility and states that “long-term solutions require awareness-raising, more media literacy, broad stakeholder involvement, and the cooperation of public authorities, online platforms, advertisers, trusted flaggers, journalists, and media groups” (European Commission, 2018: 6). Given the results of research, I absolutely agree with this position.

Given the results of research, it seems that it is absolutely necessary to educate Polish students to make it possible for them to detect disinformation, regardless of how they assess their competences in this regard. The war in Ukraine teaches us that anything is possible. It seems helpful, for example, to conduct common, nationwide digital exercises to increase the country’s immunity in this sphere to the eye of Sauron, which in this case means immunity to the spread of fake news.

In view of the above, it seems reasonable to put forward probable hypotheses (due to the limited number of students who took part in the study), with a proposal to verify them – so that the results can be related to the entire population:

a) “In the digital realm, where the credibility of a message seems to take precedence over source authority, the degree of attention paid to the authorship of information may significantly impact users’ resistance to disinformation. Consequently, are individuals who frequently consider the authorship of information less susceptible to disinformation compared to those who disregard the source’s authority, even if the information comes from a reputed site?”

This hypothesis would pave the way for further investigations into the role of source authority in the spread of disinformation in the digital environment and potential media literacy strategies directed towards internet users.

b) “Given the overwhelming prevalence of new media sources, particularly social networks, as primary avenues of information acquisition, users might be at an increased risk of exposure to misinformation or fake news. Is there a correlation between the heavy reliance on these platforms for news and a decreased ability to discern factual information from misinformation? If so, does this correlation have

implications on the understanding and perceptions about global events, such as the war in Ukraine?”

Further investigation based on this hypothesis would delve into the interplay between source selection, media literacy, and the propagation of misinformation. This would also provide insights into the potential need for educational interventions or platform regulations to combat the spread of false narratives, especially when such platforms dominate information dissemination.

- c) “Despite the critical nature of the current geopolitical situation, a significant number of students appear ambivalent or disinterested in enhancing their digital competencies regarding fake news discernment. Is there a relationship between students’ perceived self-efficacy in identifying misinformation and their interest (or lack thereof) in undergoing training to discern fake news? Furthermore, does the immediacy and severity of a geopolitical event, such as conflict or war, influence an individual’s motivation to seek or accept media literacy training?”

Exploring this hypothesis would offer insights into the underlying motivations, or lack thereof, for seeking out media literacy skills, even in pressing circumstances. It could also guide the design of interventions or awareness campaigns that tap into these motivations to promote media literacy more effectively.

- d) “Even if students are frequently comparing information from various sources, the act of cross-referencing might be superficial, relying mainly on quantity (the number of similar messages) over quality (the credibility and reliability of the source). Does the frequency of cross-referencing correlate with the actual discernment of misinformation among students?”

“There appears to be a disconnect between students’ perceived need for verification tools and their willingness to engage in free training about fake news discernment. Is there an underlying belief or confidence among students that manual cross-referencing is sufficient in detecting misinformation, making the utilization of specialized tools and training seem redundant?”

“Given the majority of students do not employ verification tools, yet a sizable percentage compare information across sources, is there a correlation between the sources they trust and the propensity to validate data manually? Furthermore, how does their trust in particular platforms or sources influence their perceived need for external validation tools?”

Exploring these hypotheses would help understand the depth and nature of students’ media literacy practices and the factors that influence their motivation to seek out additional training or tools. These findings could also inform the development of more effective strategies to enhance media literacy among students and the wider public.

e) “Although students overwhelmingly value expert opinions, there seems to be a discrepancy in their actions of seeking out these expert opinions, especially from Ukrainian acquaintances in the context of the Ukrainian conflict. Is there a perceived difference among students in the definition of ‘expert’ based on the situation, thereby affecting their actions?”

“Could the reason for the disconnect between valuing expert knowledge and not consulting Ukrainian acquaintances be attributed to cultural, social, or personal barriers, inhibiting open dialogues on sensitive topics such as conflict?”

“Considering that Ukrainian refugees can provide firsthand knowledge about the war, is the hesitation or lack of interest in consulting them rooted in a bias that views academic or institutional credentials as the sole hallmark of ‘expert’ knowledge, undervaluing experiential expertise?”

Exploring these hypotheses would shed light on students’ perceptions and definitions of ‘expertise’, the factors that drive them to consult certain experts over others, and potential barriers that prevent them from seeking firsthand knowledge from those who have directly experienced events like the Ukrainian conflict. This could, in turn, inform educational approaches that broaden the understanding of expertise and encourage more open conversations about global events.

f) “Given the high percentage of students using smartphones as their primary source of information and the inherent limitations of mobile devices in in-depth verification processes, could the device used to consume information play a role in how critically the information is assessed and verified? Furthermore, does the convenience of mobile browsing deter more rigorous verification processes?”

“Considering that 20% of students solely rely on smartphones for gathering information, are these students more susceptible to misinformation due to potential constraints of the mobile browsing experience (e.g., difficulty in cross-referencing, limitations of mobile websites, etc.)?”

“Do the available tools for fake news verification have user-friendly mobile interfaces that encourage users to verify information on the go? If not, could the potential inaccessibility or inconvenience of verification tools on smartphones be contributing to the high percentage of students who don’t utilize them?”

“Is there a relationship between the type of device used to consume information (e.g., smartphone vs. laptop) and the depth or breadth of information consumption? For instance, do laptop users tend to consume longer-form articles and engage in more rigorous verification than smartphone users?”

Investigating these hypotheses can provide insights into the behavioural patterns of digital media consumers, especially students. It can also offer guidance on developing

more mobile-friendly verification tools or educational campaigns to improve critical information consumption among mobile device users.

g) “Advanced media literacy training, focusing on a critical approach to information sources and expert verification, can increase the frequency and accuracy of information verification among students. Additionally, exposing students to false information presented by ‘artificial experts’ during training may heighten their awareness of the risks associated with over-relying on single sources of information.”

This hypothesis suggests that an intervention in media literacy might alter current student behaviours. Further research could confirm or refute this hypothesis by testing the efficacy of such training.

Perhaps the above hypotheses will allow us in a difficult geopolitical situation, within adult education generally, and thus not referring the issue of fake news only to students, to make our society more resilient. Adopting a geopedagogical perspective has just such a goal.

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