would-be teachers’ digital/information literacy competencies in the world of contradictory information*

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Keywords: media literacy; digital competence; teacher training; fake news; information

Abstract. Aim: My research aims to assess the digital competence of prospective teachers and to establish what tools they will need in their future teaching to motivate the young generations to read more. Learning by reading and then teaching based on reading and learning is gaining ground with increasing intensity in our digital world. We should also take into consideration that these activities are rapidly claiming the digital space. Taking it a little further, this paper’s goal is to find answers to the following questions: What kind of sources will would-be teachers use in education? In the case of online information, will they distinguish false or unreliable information from what is true and reliable? What can be regarded as “fake news”? Do the future teachers have adequate media and information literacy to inform their students about good electronic and traditional sources, too?

What digital competencies do they have, and what are the most important qualities of a good and effective teacher in their judgement?

**Methods:** The study will be devoted to these issues, focusing on Hungarian and Carpathian-Basin teacher-training programs. Regarding methodology, an ongoing empirical survey was used, based on a questionnaire that investigated how Hungarian university students relate to the above issues.

**Results:** As a result, the study will focus on the Hungarian National Core Curriculum 2020, which created the ‘Digital Culture’ subject and develops media literacy.

**Conclusion:** I find the appearance of fake news very important in education. In my following study, I would like to deepen the understanding of different practices, get to know new ones, and assess the opinion of the teachers who are and will be working in Hungarian public education.

**Media literacy and digital competence**

I consider competence to be a complex system of knowledge, skills, abilities, personality traits, and attitudes that enables its owner to act efficiently in different situations, also to solve complex, life-like tasks. Nowadays, the digital presence does not depend on the ICT-tools, rather on knowledge, skills, and attitude. The rapid development of Information Technology (further: IT) radically transforms our entire society and only those can prevail in this changing world, who understand these changes. Two factors can be considered as the key to success – digital literacy and the conscious usage of information and communication techniques (Szabó, Dani, 2020).

The framework that was specifically made for teachers has already been released. The DigCompEdu specifies six areas of development (professional environment, developing and shaping digital resources, managing the use of digital tools, evaluation, improving the independent capacity of students, improving the digital competence of students) and 22 elements of competence. I intend to measure competencies connected to the field of development in our large-scale national survey. We cannot forget the transversal function of digital competence from the point of view of education: it provides help with improving other competencies, for example, improving skills, like mother tongue, foreign languages, mathematical and other science skills, also with the strengthening of communication. The digital presence, however, as already mentioned, depends also on knowledge, skills, and attitude not only on the ICT-tools. Digital skills are needed to mobilize digital

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innovations to transform the economy not only in Europe, but also Africa has this on their plate⁴.

Fake news

Nowadays, the devices of the digital world have appeared in all areas of life and that affected and changed our communicational, information searching/processing, administrative, and many more of our habits; all in all, it weaves through our everyday lives⁵. Education have not been left out from this shift in paradigm. Extensive international and national professional literature tackles this phenomenon and its effects: in this study, I would like to focus on a narrower aspect, on the originality and bases of information, fake news and how to avoid them – with special regard to establishing how these appear in the education system, and whether they appear at all. Fake news travel faster than real news; during an event, fake news get even more attention than real news⁶.

Increasingly often we are faced with news which do not have any real truth in them, that is what we call fake news. They contain somewhat of a created information which is consciously used to deceive. Somehow, these news find a reader and take advantage of human naivety and gullibility. The lack of literacy can also be a factor in believing in some of that information.

A lot of time opposing opinions can also cause a challenge in the case of some news, because we have a different stance on the matter than the article, then we can believe that it is not true or we can list the opposing media as well. But these are not fake news, these are just different opinions, expressing, writing down another point of view.

It is important to refer rather to our own experiences with some news because if we are not well versed in the world of media, we can run into a fake news at any time⁷.

Students have fun with digital platforms, and the online learning environment can be used in any case; however, poorly defined critical digital literacy and education at school often results in students bringing bad critical thinking to the online environment, which poses challenges for both the educator and the school⁸.

As an educator, I believe students need to be taught the media literacy skills necessary to navigate this world and how to think critically about information. In the lessons, students learn both about research and consumption of information.

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⁵ Ibidem.
Some research shows that these lessons should include discussion and group work that allows students to discover alternative explanations and to answer their questions and to be sensitive to the way news and information are consumed and evaluated\(^9\). The ACRL (Association of College and Research Libraries) framework stems from the belief that information literacy, as an educational reform movement, only realizes its potential through richer, more complex basic ideas. Over the past fifteen years, librarians have developed learning outcomes, tools, and resources that some institutions have used to incorporate information literacy concepts and skills. Students have a greater role and responsibility in creating new knowledge, understanding contours and the changing dynamics of the information world, and ethically using information, data, and scholarships. Teachers have more responsibility in designing curricula and assignments. Librarians have a greater responsibility to extend learning to students and create broader collaborations with teachers\(^10\).

Most of our knowledge about the world is not coming from our personal experiences rather from the mass media outlets. What happens if that information is being deliberately distorted, falsified to manipulate the news consumers? How can we recognize these deceptive news, what kind of features do they have, how can we shield ourselves from them?

**Fake news in education worldwide**

**Germany**

There is a subject in Germany which can rarely be found in any other countries, and if so, it is of an inadequate quality. This is the subject called media literacy, which they use quite well. It is flexible, every sequence can be followed between disciplines and can be easily prepared. The “Good News Bad News Fake News” program helps the students to meet with quality journalism and the press. They get a closer look into the business world of media, its rules and laws. They are taught how to use social media properly, the danger of sharing. They learn about the vloggers as well\(^11\).

A lot of teachers in Germany are very sceptic about the existence of digital media in schools. In the opinion of 49% of Headmasters, digital media are overrated in education. 50% of teachers are against their usage. 1471 Headmasters were asked in 2018, whom found the attitude of the students a problem and did not realize the development and advancement of technology. Peter Meidinger thinks that schools cannot adjust to digitalization, they are skeptical about how this affects


the students, how they can really learn and develop digitalized. It is very important to mention that this also depends on the personality of the teacher\textsuperscript{12}.

The Cultural Minister of Lower-Saxony (ger. Niedersachsen) made new teaching aids and curriculum for fake news. He thinks that the best methods for manipulation experiments is strengthening media competency. The curriculum has a great structure, starts with the recognition of fake news, manipulation situations mixed with experiments. In total, it contains three new educational segments, which were made by the German Ministry of Culture so that it is available to every institution in Lower-Saxony.

The educational units “Fake News and Social Bots in the digital world” were developed by many institutions for High Schools. The goal was to drive students to embrace critical thinking with the help of practical and real examples, to introduce source criticism, and to prepare the evaluation of studies, texts, pictures, and videos on the internet. The program especially put a big emphasis on social media. The curriculum has different tests, examples, texts, and links which helps the teachers work and prepare. If someone would like to test themselves, they can do it with the “Fake News Check” application, which is some sort of a “Fake News-warning light” and can be downloaded on your phone for free. It provides 19 questions and the users have to decide if the news if true or false. The app can be used in education as well. For this series of questions, the Stop Fake News Portal prepared teaching aids and tasks.

The portal takes on a big role in the aspiration of the government. Its main goal is to strengthen media competency in schools. The government created the concept in 2016, which marked out goals for training in media competency and the digital world until 2020. For every field of training, they formulated different steps which need to be executed. One of the main goals is the introduction of media competency in each and every curriculum of a subject, for which the schools have a whole network of media education available\textsuperscript{13}.

**Brussels**

In Brussels, as the consequence of a previous survey, the Lie Detector program was made. During the survey, students were asked where did they find certain information, what is their main source. Their answers were not astonishing, they listed the most common social media platforms; Instagram – a photo sharing application, not a valid source, Facebook, Twitter, also function the same way. Messenger, WhatsApp – maybe some truthful information can be found within some conversations, but we can never be careful enough. Many times, we ask the


question that why even journalism is important if people cannot see the difference between journalism and total fiction\textsuperscript{14}.

That is what motivated Reppert-Bismarck, a journalist, to quit his job and create the Lie Detector program. Its task is to train journalists in teaching the students (above 10), where and how they should obtain information which is certain, what kind of sources should they work with, and how to identify false information. The program is supported by the American charity service, the Wyss Foundation. The courses were started in Brussels. One teacher who attended this program states that she read everything twice and now keeps a special attention on her students. She thinks you can never know what is going on in the social media, someone just states their opinion and never thinks about the consequences, does not know what effect their expression of opinion has.

For those who cannot attend these courses, there are other options. A well-developed webpage; gerbadnews.com – a game helps in recognizing fake news. A Dutch group, the DROG, created this webpage against fake news, to control fake news in our surroundings, to teach how to recognize them and how to defend ourselves from them. The group is made out of academics, journalists, and employees of the media. The users can put on the shoes of a journalist, spread fake news, and have as many readers as possible\textsuperscript{15}.

**Finland**

And last but not least, I would like to mention the situation in Finland, which is not surprising, that after different surveys, their activity in education against fake news is at the forefront. They included a checklist of methods used to deceive readers on social media: image and video manipulations, half-truths, intimidation and false profiles, the title was "Have you been hit by the Russian troll army?" – The students met this in a college lecture, the goal of the course was to teach students, teachers, journalists, and politicians how to recognize fake news. We can say that this initiative lead to that they started to establish how they can teach students and children about fake news. A year later officials were assigned to tackle this topic, and the same year, the educational system was also reformed; its main segment was to educate the students to be critical thinkers. The goal was for the student to think twice about who wrote the news, from whom the information originates before they like, share, publish something in the social media.


As the diagram shows, Finland is really outstanding, ahead of all the European countries, it proves that they are the most resistant against fake news. At the forefront are the other northern countries, because they try to cooperate in the field of education. This result is the Media Literacy Index of 2018, which was published by the Open Society Institute in Sofia.

Different studies prove that the quality of education is related to the resilience to fake news. With more knowledge, with better critical-thinking skills, we can handle fake news better. Finland, Sweden, and the Netherlands have been using digital literacy and critical thinking skills in education for many years now. They purposefully start to educate children in the world of fake news.

A Finnish organization, the Faktabaar, aka FactBar, applies professional fact-analytics in schools. The organization also thinks that good searching skills and critical thinking is the key. There are three field in which we have to be conscious; misinformation/mistake, disinformation, malinformation/stories. All three are some sort of fake news with which we have to be careful.

“Finland’s government considers the strong public education system as a main tool to resist information warfare against the country,” says Marin Lessenski, Program Director for European Policies at OSI-Sofia. Widespread critical-thinking

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skills and a coherent government response are key to resisting fake-news campaigns, he says.\(^\text{17}\)

**Fake news in the Hungarian education system**

The Hungarian government accepted within the Digitális Jólét Program (further: DJP, eng. Digital Welfare Program) the digital child protection strategy, which would educate children in conscious internet usage. The government would like to put a bigger emphasis on digital security, that is why it was planned to teach what is fake news in schools. The schools would educate not just children but the parents and teachers as well in conscious internet usage.

For us to recognize fake news, we need a far-reaching media-system, cross-reading and thorough knowledge of the text. All this can be achieved by the improvement of media literacy. That is why there are DJP Points nation-wide, which provide free of charge media literacy training which raises the awareness of parents and sensitizes them in the issue of internet usage. This was barely completed, because it is not the whole part of the National Core Curriculum (further: NCC), like in other countries. In Hungary, the subject of media literacy is the part of the public education to this day for 1-1 year in each class. However, in most places, it is not realized. The ombudsman report of 2016 proves this, stating that around 2004-2005 the subject has been entered into the NCC, however, neither the schools nor the teachers used it. Currently, the European Union is also backing up this initiative; however, in Hungary, the “big fake new movement” has not taken off yet. Issues connected to digital security could also get into the new NCC, but to spread media literacy is just as important. It would be very important for children to recognize the so-called fake news, false information and recognize if they are the victims of abuse – said an expert, who thinks that the programs connected to raising awareness have already started, and professional dealing with conscious internet usage is already helping with the work of teachers in Primary - and High Schools alike.

The subject of media literacy could be the place where students could talk about this topic within school environment, and could be lead into the world of fake news. However, the subject is in dire condition and hard to find in schools. The topic could be journalism, different mediums, platforms, news, and fake news. Aside from that, the subject should be based on educating students to be critical thinkers, how to adapt to different media, how to react to information. Separated into different topics – language, values and norms, social sciences, politics, economics, society – it would help with other subjects too.

A few programs can be found but the teachers do not know about them. Two associations, who represent the same values, the Televele Médiapedagógiai Egyesület and the Urbanlegends, formulated a concept of the fake news. The

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associations have already created the Drone Program in 2016 which created different educational methods for Primary and High School students to examine the credibility and reliability of information. The platform teaches the students how they can orientate themselves using critical thinking inside an informational medium. Unfortunately, nowadays, this is not really successful because we meet with a lot of unfiltered information and we cannot be certain of anything in the golden age of social media. Our environment constantly changes and more and more information surrounds us. On the other hand, it compels us to reach as much information as quick and easy as possible. This rapidly moving world incites us for this. That is why, the program was created to teach the students, as the target audience, a mechanism with which they can filter information and helps the user to decide. This is a longer process that can birth extraordinary results. This program guides us not only through the digital worlds, it also helps to improve basic characteristics, skills, for example, the sense of responsibility and other competences. The program builds upon a different topic depending on age; in High School, the topic is the information flow of social media, algorithms, filtering software, general media usage. It was realized within the supporting program of Open Society Institute Education Grassroots Activism in Hungary 2016.

There are developed, constantly updated curricula and tasks that teachers can use at anytime, which were created by the above mentioned Televele association. However, to be a part of the program, the teachers must attend an e-learning course, where they become acquainted with the topic, and obtain an overall picture. The co-workers of the association also offer courses to the teachers.

The students during the course can practice fact checking methods, what tools they can use to find out if a picture is real, which in a world of deep-fake videos and Photoshop is essential. During the course, they create a “portfolio”, they gather real and fake news, create memes, write their own news, because with all these, they meet with a lot of different point of views.

Summary

My study concentrates on different strategies which are useful in the area of fake news and media competency in teaching. I found it very important that an increasing number of countries integrate this into their curriculum, because with this constant improvement of technology, people and actual information tends to get lost. On each platform, most of the time, we cannot follow what is going on in the world. That is how they use the naivety of the people. It is worth to deal with this topic in childhood in the educational processes. It makes me sad to see how a lot of parents deal with their crying children nowadays. They give them a digital device, phone, tablet. Why? I ask the question and so do many others. These devices are

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an immense source of danger not just for children but later for teenagers as well. That is why I find the appearance of fake news very important in education.

The Hungarian National Core Curriculum 2020 has caused a conflict, and I would like to highlight the subject of digital culture as a result of the media literacy development. Even the digital culture name choice that replaced the previous informatics has a number of important messages. The curriculum that has so far taught predominantly theoretical knowledge and embedded step-by-step transitions in the use of some software will be replaced by a subject that strengthens many competencies and provides timeless and versatile knowledge. The name change also points out that "digital culture is part of universal human culture" and cannot be separated from the different areas of life, it is present everywhere. The main goal is to develop the ability to learn about the achievements of the digital world on our own, to have a positive attitude, and to have all the competencies to become a useful citizen of the society. Interdisciplinarity is also much more pronounced than before. In each case, the students can prove the acquired knowledge during the application, if possible in the framework of a task related to another field of knowledge. Due to its generality, this subject is also indispensable from the point of view of equal opportunities, as those who lag behind in the field will be disadvantaged in all other areas over time. Three main areas of development are: the use of IT tools, digital literacy, development management of data obtained from the digital environment.

References


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Kompetencje cyfrowe/informacyjne potencjalnych nauczycieli w świecie sprzecznych informacji*

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Słowa kluczowe: umiejętność korzystania z mediów; kompetencje cyfrowe; szkolenie nauczycieli; fałszywe wiadomości; informacja

Treszczenie. Cel: Moje badania mają na celu ocenę kompetencji cyfrowych przyszłych nauczycieli i ustalenie, jakich narzędzi będą potrzebować w przyszłym nauczaniu, aby zmotywować młode pokolenia do czytania coraz więcej. Uczenie się przez czytanie, a następnie nauczanie oparte na czytaniu i uczeniu się zyskuje coraz większą popularność w naszym cyfrowym świecie. Powinniśmy również wziąć pod uwagę, że te działania szybko zajmują przestrzeń cyfrową.

Idąc nieco dalej, celem tego artykułu jest znalezienie odpowiedzi na następujące pytania: Z jakich źródeł będą korzystać przyszli nauczyciele w edukacji? Czy w przypadku informacji online będą odróżniać fałszywe lub nierzetelne informacje od prawdziwych i wiarygodnych?

Co można uznać za „fałszywe wiadomości”? Czy mają odpowiednie umiejętności medialne i informacyjne, aby informować swoich uczniów również o dobrych źródłach elektronicznych i tradycyjnych? Jakie mają kompetencje cyfrowe i jakie są najważniejsze w ich ocenie cechy dobrego i skutecznego nauczyciela?

**Metody badawcze:** Niniejsze opracowanie będzie poświęcone tym zagadnieniom, ze szczególnym uwzględnieniem węgierskich i karpackich programów kształcenia nauczycieli. Jeśli chodzi o metodologię, zostało wykorzystane aktualne badanie oparte na kwestionariuszu, który bada, w jaki sposób studenci węgierskich uniwersytetów odnoszą się do powyższych zagadnień.

** Wyniki:** W rezultacie badanie skoncentruje się na węgierskiej narodowej podstawie programowej 2020, która stworzyła przedmiot „Kultura cyfrowa” i rozwija umiejętność korzystania z mediów.

**Nioski:** Uważam, że pojawienie się „fałszywych wiadomości” jest bardzo ważne w edukacji. W kolejnym opracowaniu chciałabym pogłębić różne praktyki, poznać nowe i ocenić opinię nauczycieli, którzy pracują i będą pracować w węgierskiej edukacji publicznej.
Digitale bzw. Informationskompetenzen
künftiger Lehrer in einer Welt von Fake News*

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Stichworte: Fertigkeit der Mediennutzung; digitale Kompetenzen; Lehrerschulung; Fake News; Information


online-Information die falschen bzw. unzuverlässigen Nachrichten von den richtigen und glaubwürdigen unterscheiden? Was kann man als „Fake News“ bezeichnen? Haben sie die entsprechenden Medien- und Informationsfertigkeiten, um die eigenen Schüler auch über die geeigneten elektronischen und traditionellen Quellen zu informieren? Welche sind ihre digitalen Kompetenzen und welche Eigenschaften sollten einen guten und effektiven Lehrer ihrer Meinung nach am meisten charakterisieren?

Forschungsmethode: Die vorliegende Bearbeitung konzentriert sich auf diese Fragen mit Druck auf die ungarischen und karpatischen Lehrerbildungsprogramme. Geht es um die Methodologie, so wurde an die aktuelle Untersuchung mit einer Umfrage angeknüpft, die ergründet, wie die Studenten der ungarischen Universitäten die besagten Themen betrachten.

Ergebnisse: Im Endeffekt zielt die Studie auf die ungarische nationale Programmgrundlage von 2020, die das Fach „Digitale Kultur“ begründete und die Fertigkeit der Mediennutzung entwickelt.