Critical Internet Usage – Erasmus+ Projects Effects as Support for Senior Citizens in the Digital World

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Thesis. This paper aims to present the Critical Internet Usage project and its final results. The project enabled the development of various learning materials, and the collection and systematization of knowledge regarding senior citizens' awareness of critical thinking and its usability as well as gaining information about their educational needs.

Concept. The surveys developed during the project were focused mainly on seniors' general understanding of critical thinking, its usage and their general thoughts about teaching and learning this skill. However, the toolkit and workshops were focused on increasing the awareness of what critical thinking is, the basis of the most common Internet slang, online safety and providing the learner's knowledge through both theory and practice, enriched with creativity and memory training.

Results and conclusion. During the course of the project, a toolkit of more than 100 pages was prepared to help people develop their teaching skills and apply multiple learning sessions for older learners. Workshops were provided for seniors from three different countries. Each workshop was attended by at least ten seniors per partner organisation. Multiple answers on prepared surveys were collected, and this, in turn, made it possible to create collective answers. Older learners are more willing to learn when they are able to notice the opportunities to apply some skills in their everyday life and when they are shown the real examples. Unfortunately, some of the seniors are not aware of what critical thinking is. This information can be a form of inspiration for adult educators to promote and teach critical thinking skills.

Keywords: critical thinking, project, key competencies, seniors, older people, social media, Internet, adult education

Introduction to critical thinking

Critical thinking, especially in the era of the Internet — which provides general access to social media and contact with people from all over the world — has become a key competence required for functioning freely and safely in the modern world. The ability to consciously, as well as subconsciously, verify the credibility and usefulness of data and sources brings numerous advantages, such as supporting the educational process and identifying different behaviours or assimilated content, and questioning what has hitherto been accepted (Boryczko, 2018). Critical thinking itself also allows for sound and safe functioning in society (ten Dam & Volman, 2004). Despite the functionality of this competence, its definition still remains unclear. The problem of defining critical thinking was addressed by Maria Sanders and Jason Moulenbelt (2011), who noted that the definition can vary depending on the context and cross-disciplinarity.

Marcin Boryczko (2018) lists the following skills that make up critical thinking: questioning; evaluating; understanding contradictions; self-development — all in the social sphere. Jonathan Heard et al. (2020) also add to this the ability to use information already held and to solve problems. Werner Ulrich (200), on the other hand, emphasises the importance of critical thinking, not only in professional life but also points out that this skill, which combines many different competencies, becomes a kind of liberation from incompetence precisely in social life as well (also Fahim & Eslamdoost, 2014).

The use of mnemonics and creativity training to increase seniors' absorption of new knowledge has already been mentioned previously. The effectiveness of stimulating creative processes to teach this skill more effectively has been confirmed by the research of Mahmoud Azizi et al. (2022). Mansor Fahim and Samaneh Eslamdoost (2014), on the other hand, note that the weakness of teaching is transmitting content rather than learning how to think or learning how to use this knowledge, and point out that teachers may have insufficient critical thinking skills. This is, of course, in no way about their self-education but about what they have been taught (Fahim & Eslamdoost, 2014). This is particularly problematic considering that knowledge is not onlyimparted by teachers and textbooks, but nowadays other media, which have great potential which one needs to know how to use in the right way, can also be used (Al-Ghadouni, 2021). Heri Jaka Setiawan and Nur Islami (2020), looking for the best way to teach critical thinking, emphasise how important it is to use newly acquired skills in practice. Such an opportunity was particularly noticeable during the Covid-19 pandemic when people were confronted for the first time with the need to switch to a remote working mode, and for many this was definitely a new experience. Forced to change the form of working in

the context of both work and education, people had to adapt to the education that was available. and in a short period of time increase their technical skills and start applying them in practice, which should have resulted in changing their attitude towards technology to a more positive one (Kobylarek, 2021). It was a quick process of adaptation to a new life situation.

Introduction to the Critical Internet Usage project

Critical Internet Usage is an international project from the Erasmus+ programme supported by the European Union. The project is led by Polish Non-Governmental Organisation Fundacja Pro Scientia Publica with the support of partners from such countries as Turkey – Nazilli Hayat Boyu Ogrenme Dernegi and the United Kingdom – Kairos Europe Ltd. It started in December 2020 and was aimed at increasing the awareness of critical thinking and the dangers that can be faced on the Internet, and to prepare learning/teaching materials dedicated for individuals and organisations interested in the topic of critical thinking and cybersecurity.

Crucial for the development of the project was the usage of mnemotechnics and creativity training so as to improve the process of learning. Currently, this form of teaching can still be called innovative. All the above-mentioned organisations specialise in the field of adult education.

Toolkit

The toolkit created during the duration of the project is the most visible and main outcome and intellectual output of the partners. The toolkit which was created is available in three language versions – Polish, Turkish, and English. The whole educational material contains over 100 pages of information and materials which can be used in the learning/teaching process. The total duration of the learning sessions for this material is 13 hours. However, the flexibility of the materials and its dissemination online provides the benefit that sessions can be led both online and face-to-face. The toolkit consists of three chapters, which cover such topics as "critical thinking online", "fake news", and "creativity training in the context of teaching about Internet security." Chapters include the following sections:

- *critical thinking online* – definition, media literacy, dangers on the Internet, trolling, ways to notice the fake and distinguish reliable information, empathy, empathy training, and development of emotional intelligence, social media

addiction, misinformation and disinformation, memes and clickbaits, social media marketing;

- *fake news* – fake news, fake news and diet, who spreads fake news and how they are created, characteristics of the reliable sources and ways to recognise them, application of critical thinking, consequences of the lack of this skill, fake news in the context of politics and migration, spotting the fake, evaluation of materials;
- *Creativity training in the context of teaching about Internet security* – creativity trainings, the usefulness of creativity training, techniques of creative thinking, ice breakers and group divisions, cybersecurity, different types of cybercrimes, online romances, and stalking.

Despite the fact that each chapter covers a lot of theoretical knowledge, their advantage lies in including multiple activities for individual learners and groups, which allows them to put newly acquired knowledge into practice almost immediately. Moreover, each of the chapters concludes with a case study strongly connected to the topic, which can highlight the importance of one of the chapter's subjects.

Workshops

The project contained two kinds of workshop. The first of them was led online in three sessions day by day, the duration of each one being two hours. Each training session was provided in an international level by a trainer from a different partner organisation who has provided workshops on a subject in which they specialise. That was the first time that the toolkit was tested in practice. The trainers had the possibility of using various software so as to make their sessions the most suitable and appealing for the learners. On the official website of the project, the educational materials – presentations – prepared by the trainers are available in an English language version and all of the trainings were provided in this language. In the material, learners were also provided with detailed information on the topics covered in the individual sections, as well as brief information on the trainers and their experience.

The second workshops were provided in face-to-face form at a national level. Trainers from each organisation provided two workshop sessions to senior citizens from their own country. Similarly, trainers could decide which topic could be the most suitable and useful for their older learners. Each trainer provided two learning lessons for not less than 10 seniors per

session. The training was led in national languages. Moreover, also in this case, trainers could use different materials and activities so as to help learners to learn and systematise the knowledge gained during the sessions.

Surveys

As one of the project results, all the partners prepared their proposals of the questions which could be put to senior citizens so as to allow the trainer to be more familiar with seniors' knowledge in the field of critical thinking, as well as their educational needs and their familiarity with the Internet. The surveys prepared by the partners consists of 9 questions in total and was shared as follows:

- Question 1. *What do you think causes the most significant difficulty in critical thinking?*
- Question 2. *How do we effectively disseminate knowledge on cyber crimes and use critical thinking not to fall victim?*
- Question 3. *How do we arouse people's need for critical thinking?*
- Question 4. *What skills are needed by people in order to improve their critical thinking?*
- Question 5. *What do you think are currently the gaps in people knowledge, skills and attitudes towards critical thinking?*
- Question 6. *What do you think is the best training approach to teach about critical skills and cybersecurity?*
- Question 7. *Why should adults be equipped with critical thinking methods?*
- Question 8. *What kind of changes towards embracing life occur in individuals whose critical thinking competencies are increased*?
- Question 9. *What kind of basic competencies to combat cyber attacks should be acquired?*

The answers to these questions enabled the development of aggregate responses, and conclusions to be drawn. The questions were collected in two forms – open questions and focus group. The results are presented below.

Q1. ***What do you think causes the most significant difficulty in critical thinking?***

The meaning of critical thinking appeared to be crucial for this question. One group of seniors were unfamiliar with this term, and confused critical thinking with constructive

criticism. After explaining this term, it was possible to continue. Despite this, the most significant difficulty that senior citizens highlighted was too great an amount of information as well as fake news amongst the reliable sources of information. The inability to separate these two and the lack of fluency of technology is very confusing, so gaps in media literacy should also be considered. Highly crucial to this question was that many seniors indicated personal limitations such as laziness and lack of will to read more or to analyse. Some online sources also play on feelings, which, combined with social pressure, obscures logical thinking.

Q2. *How do we effectively disseminate knowledge on cyber crimes and use critical thinking not to fall victim?*

To effectively disseminate knowledge on cyber crimes and use critical thinking to avoid falling victim, respondents mainly highlighted the importance of education in this field. They are sure that proper education through practical workshops, seminars, self-education, self-development regarding ICT competencies, as well as taking part in various events organised by for example, NGOs. Critical thinking and cybercrimes should also become a more important topic and shared more on social media so as to catch people's attention and arouse their interest in online safety. Respondents also noticed the importance of self-awareness and our own will to remain safe and carefully analyse the information we gain from Internet sources. This limited trust should also be treated as entirely normal behaviour, but for this reason, some seniors admitted that they are not willing to use the Internet at all.

Q3. *How do we arouse people's need for critical thinking?*

I this question, respondents were almost unanimous in stating that their curiosity should be stimulated by presenting real-life examples, the benefits they can acquire by using critical thinking, and the consequences pf what can happen to us if we are unaware of them and the power of the Internet. There were also responses with suggestions that facing them with discussions, asking them multiple questions, and forcing them to ask questions such as "how-why" can result in questioning become a habit. Using social media may also be helpful, but there appeared some doubt that if somebody does not want to think in a critical way, then they will not.

Q4. *What skills are needed by people in order to improve their critical thinking?*

Most of the respondents agreed that there are two main skills that are needed in order to improve their critical thinking. First of them is a natural curiosity of the world and people's own will and need to learn, listen to others, be open-minded and discover new things and the other is the research skills and ability to analyse and question the information obtained and the will to solve problems. Less important to respondents seems to be the ability to use technology, but they point out that critical thinking skills should be taught from childhood and practised throughout our lives. There were also suggestions for applying the principle of limited trust.

Q5. *What do you think are currently the gaps in people's knowledge, skills and attitudes towards critical thinking?*

The answer appearing right after insufficient digital competences was people's laziness, ignorance, and limitations, and the belief that this problem does not concern them, or a belief in one's own perfection and lack of autonomy in terms of Internet usage. Not being careful about selecting reliable sources, or placing too much faith in specific sources, can also be problematic, but this can be linked to the huge amount of information we are constantly bombarded with. People have gaps in their knowledge of critical thinking and how to use it. They may also fear criticism, or be very sensitive to evaluation. There was also the response that sometimes post-Soviet thinking can be observed, manifesting itself in a fair amount of propaganda in people's minds.

Q6. *What do you think is the best training approach to teach critical skills and cybersecurity?*

The majority of respondents stated that the best approach would be to conduct various types of meetings, exercises, face-to-face workshops with an opportunity to ask questions and use these activities in learning. The consequences of misuse of the Internet and lack of critical thinking should also be highlighted, and this should be based on real events through case studies. The facilitator also plays an important role and should be experienced in their field and credible. Some expressed the need to develop creativity and self-confidence during training.

Q7. *Why should adults be equipped with critical thinking methods?*

The answers given by respondents to this question were extremely varied. Nevertheless, it was noted that acquiring and using critical thinking skills can be useful in

teaching, and that people can become much safer on the Internet thanks to this competence. There is a huge amount of information out there daily, some of which may be misinformation and too much of which is fake news. Education in this field can affect different generations, not only the youngest — who should be taught critical thinking from an early age — but also adults, as they too deserve to be safe. This will make it possible to physically and psychologically increase the level and feeling of security among Internet users, as well as enable them to avoid the consequences associated with its misuse (e.g. stress, cybercrime). It has also been noted that not everyone realises the usefulness of this skill, especially adults who are responsible for others. Moreover, media literacy nowadays allows us to connect with a wide range of people, or to remain up to date with various news items, and therefore, through critical thinking, adults will be able to function much more safely in society. Additionally, it protects human rights and democracy, fights stereotypes, increases our independence and facilitates self-development. It is important to focus on the education of adults because of their effectiveness and experience, and the fact that it is they who have the chance to raise a whole new generation who will ask "why?". Some respondents indicate that specific skills are even required in order to be able to make full use of critical thinking, which makes it possible, among other things, to make correct, non-emotional judgements on a given topic or to solve problems effectively.

Q8. *What kind of changes towards embracing life occur in individuals whose critical thinking competencies are increased?*

Many answers indicated that generally life then becomes much easier, we cope better with tasks, and we are less likely to fall prey to cybercriminals, because we are aware of how they work and how to defend ourselves against them. This increases self-confidence, assertiveness, and individuality, and allows us to respect ourselves. In turn, increasing self-confidence reduces our stress, we become part of society and we can influence it to create a healthier society in many ways. Critical thinking is also supposed to influence people's sensitivity and curiosity about the world, as it becomes possible to distinguish truth from falsehood, and individuals may feel the need to contribute to society — for example, through research. Some respondents felt that over time, critical thinking is employed unconsciously.

Q9. *What kind of basic competencies to combat cyber attacks should be acquired?*

Respondents outlined the whole process that should take place in order to be safe online, starting with basic computer literacy, including the need to change passwords on

different sites, learning how to use the Internet and social networks, and continuous learning of ICT skills. In other words, a good knowledge of cyberspace becomes crucial. Attention was again drawn to the importance of self-education in the development of critical thinking skills, as well as taking care of one's own safety online. It is necessary to pay attention to details in order to identify threats quickly and efficiently, so as to be able to react as quickly as possible and prevent further damage. Many respondents showed interest in attending classes/meetings on cybercrime and cybersecurity, where special attention was paid to early recognition of problems, and raising awareness of where attacks may come from and what to do once someone has been attacked. Communication with others was also highlighted in the context of online safety, as was the ability to think in a critical way. It is worth noting that respondents are aware that without the required knowledge, they will not be able to do anything.

Summary

In analysing the surveys, it can be noticed that the multiple elements (numerous different activities, creativity training, professional trainers, need for learning through practice, special focus on real-life situations and consequences, etc.) mentioned by the older respondents are covered by the toolkit created as the result of this project. Comparing this with the answers obtained, it can be concluded that the toolkit can be considered a well-developed tool for teachers, learners, educators, organisations, and individuals who want to help others develop their critical thinking or to work on their own skills. When teaching, special focus should be placed on providing the knowledge of what exactly critical thinking is, why it is needed and how it can help, as well as on providing practical, real examples of potential dangers. Practical exercises to immediately test the knowledge acquired should be a compulsory part of the course, especially when working with older learners who may be prejudiced against the technology, or consider it not very safe.

It is also worth mentioning that there are tools that can benefit research on the level of critical thinking and, at the same time, enable the individualisation of courses in the development of this skill for the needs of a particular group. An example of such a tool could be the Critical Thinking Questionnaire (CThQ) test tool explicitly prepared for the needs of adults and adolescents (Kobylarek et al., 2022). This tool enables us to detect which precise critical thinking component is a weakness, showing what needs to be worked on. Critical thinking and other related capacities can contribute not just to self-development and improve functioning in a society made up of different cultures, but moreover, "only a worldwide community of critical thinking people can succeed to save our planet from ruin" (Meynen,

2016, p. 17). It can be said that despite being one of the modern key competencies, critical thinking is even an element of our future.

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