Responsible Online Ethical Teaching in Higher Education During the COVID-19 Pandemic

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Abstract In the context of the COVID-19 pandemic, when a relevant amount of education at all levels has shifted online, there has occurred a series of unprecedented issues related to ethical technology use by teachers and students. Behind the anxiety generated by the online teaching–learning environment and the joy of discovering the benefits of online education of both teachers and students, there have been reports of serious unethical technology use issues manifested as, for example, violations of the General Data Protection Regulation, of intellectual and authorship rights, software piracy. Such issues call for immediate response aimed at diminishing and controlling unethical technology use in online teaching. To this effect, this paper aims to outline the problems connected to online (un)ethical teaching and provide a series of guidelines to be included in the teacher training curriculum as soon as possible. Our proposal provides possible solutions to such issues as the recording of online teaching sessions without the consent of the participants and use of the recording by third parties for various purposes; attendance of third parties to online teaching sessions without the participants—teacher and/or students—being aware of a third party's presence in the online meeting; decreased motivation of both teachers and students to participate and give their best to the online teaching–learning process.

Keywords COVID-19 · Ethics · Higher education · Online teaching · Solutions

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1 Introduction

The World Health Organization (WHO) declared COVID-19 as a global public health emergency of international concern on January 30, 2020, as well as a pandemic on March 11, 2020 [1]. There have been other cases of viruses negatively impacting human life in several countries in recent years (the SARS-CoV, the H1N1 Flu), but the COVID-19 pandemic has affected the entire world, globally impacting a wide variety of human activities domains with serious economic, social, and health-related consequences: health care (body care, mental care), education, traveling (whether for business or tourism), and the leisure industry (sports, hotels and restaurants, arts and entertainment, etc.). Short-term closure of academic institutions under emergencies is not recent; however, the global scale of today's educational instability is unparalleled and, if sustained, may inflict psychological distress and misery at various levels [2].

The COVID-19 pandemic has had a serious impact on students, instructors, and educational organizations around the globe [3], causing schools, colleges, and universities to close their campuses so that students could follow social distancing measures [4]. Shifting from the conventional, on-site educational environment to the online, virtual one has generated challenges, obstacles, and increased effort to tackle newly emerged issues in areas ranging from limited to total absence of social interaction to technological devices breakdown. As nobody knows when the COVID-19 pandemic will be overcome, educational institutions around the world have undertaken the use of already available technical resources to create online educational materials for students of all academic fields, as well as develop, together with companies in the domain of technological research and development, innovative digital applications to enhance the virtual educational experience [5]; also, academic organizations need to constantly improve their curriculum by adding new instructional methods and strategies [4].

As early as the 2000s, UNESCO researched the challenges implied by implementing the use of the Internet in schools from the perspective of computer coordinators; the research concluded by highlighting ethical issues as one of the critical obstacles in online education, revealing, at the time of the study (1998–2001) a 10% increase in concerns about ethical issues, meaning that ethical and cultural worries have been continuously soaring [6]. The need for responsible online ethical teaching has also become equally imperative. Should young people be educated/taught how to learn, promoting flexibility in thinking, adaptability, cooperation, and dialogue and perhaps most importantly the ability to anticipate change in the context of the future (challenges)? The digital generation, those born between 1996 and 2010, spends more and more time in the virtual world, playing, writing, or reading blogs, visiting and creating, using one or several virtual identities. In this context, what is online ethical teaching and what should the aims of online ethical teaching be?

The permanent contact with the virtual world brings not only benefits but also specific dangers that education should diminish. The inappropriate use of modern technologies in educational activities not only has become a major problem at the

international level, as more and more specialists in the field are trying to find solutions to mitigate the negative effects that derive from this aspect.

Based on the term of computer ethics as defined by Moor and Bynum in 2002 [7], various authors try to answer the following question: what is wrong and right from the ethical point of view in the educational process carried out in the virtual environment. According to Beycioglu [8], the term *computer ethics* could be a subfield of information ethics which was defined by Reitz in "Information Ethics" as "the branch of ethics that focuses on the relationship between the creation, organization, dissemination, and use of information, and the ethical standards and moral codes governing human conduct in society" [8, p. 202].

When we choose to use a certain computer application in carrying out teaching activities for students, we should also be concerned with issues related to the safety and security of the identity of all those involved in the teaching act. It is important that the computer applications or educational platforms used in the educational act gain the trust of those whose data are collected.

Within the virtual team comprising the teacher and the students, the ethical aspects must be maintained as it happens in the case of a face-to-face experience. Blockages in communication due to depersonalization in the online environment can lead to actions of violation of ethical principles and the temptation to cheat or copy.

In general, unethical behavior is related to individual actions that a person performs in the idea of selfishly gaining advantages over others. Ethical issues regarding online learning are focused primarily on copyright, fair-use and plagiarism, and cheating. Even if studies show that students who cheat in face-to-face learning systems will do the same in online learning, there is a perception that the virtual environment could encourage cheating and unethical practice by using a different identity, a virtual one. The students are more and more receptive to creating several virtual identities through which they can become whatever they want. Data privacy is a very important aspect of security and safety in the online environment which has implications for ethical issues.

This chapter aims to define responsible online ethical teaching and provide answers to a series of related issues: challenges and problems connected to online education from the perspective of ethical technology use by *teachers* and solutions; challenges and problems connected to online education from the perspective of ethical technology use by *students* and solutions; a series of guidelines on ethical online education to be officially included in the teacher training curriculum at national and international level.

2 Method

This paper is based on a literature review type of research. This type of approach supports researchers to identify, evaluate, and systematize the literature on the undertaken research topic as well as extract and formulate solutions to the research objectives. The literature search was begun in March 2020, following worldwide news

of the outbreak of the SARS-Cov-2 pandemic, and was conducted in the databases EBSCO, Google Scholar, ProQuest, ResearchGate, and others, using the following keywords: "online education, COVID-19", "online ethical/ unethical teaching", "ethical/unethical technology use by teachers", "ethical/ unethical technology use by students", "online teaching, teacher training", and "online teaching, teacher training curriculum". The selection of relevant studies consisted of covering by hand all the articles on one or several of our study's research objectives:

O1: to define online ethical teaching in higher education during the COVID-19 pandemic;

O2: to highlight the challenges and problems connected to online education from the perspective of ethical technology use by *teachers*;

O3: to highlight the challenges and problems connected to online education from the perspective of ethical technology use by *students*;

O4: to provide solutions to the challenges and problems connected to online education from the perspective of ethical technology use by teachers and students and guidelines on ethical online education to be officially included in the teacher training curriculum at the national and international level as soon as possible.

3   Results

The literature research generated a relevant number of articles published in 2020, or under publication, which illustrates the acuteness of education in the COVID-19 pandemic context. Numerous articles contain the words "COVID-19" and education in their titles, and the topics of such articles draw on such themes as problems related to online learning and teaching in various domains of education and for different educational cycles or learner ages; advantages and disadvantages of online education; positive and harmful effects of online education at the physical, mental, and emotional level of both teachers and learners; proposals and suggestions of best practices for conducting online education at various disciplines; ethical aspects connected to the use of information technology in education; personal data protection in the virtual environment and risks associated with online teaching–learning for teachers and students from this perspective; online education as generator of even more inequality in terms of the right to education for children and students from vulnerable groups, the social, economic, cultural, physical, mental, moral, emotional effects of online education on the short and long terms, etc.

We shall further present our findings for each of the research objectives.

Regarding O1, to define online ethical teaching in higher education during the COVID pandemic, online ethical teaching may be defined as a set of rules both for e-Learners and e-Teachers that guides their conduct in the online environment in the direction of mutual respect, justice, tolerance, and avoidance of all acts and discourses that are harmful to others [9].

Online teaching implies the use of information technology. A series of studies have been elaborated on the unethical use of IT in education, resulting in the identification of unethical online practices: plagiarism, inappropriate use of programs, pirated software, or, in other words, all activities involving the violation of copyright [10, 11]. Mâță et al. [12] have identified a series of models and theories of unethical use of information technologies in higher education: general theories (the theory of planned behavior, the theory of reasoned action, the theories of Jean Piaget and Lawrence Kohlberg on the stages of moral development, etc.); decision-making models (e.g., Hunt and Vitell's comprehensive model for ethical decision making, detailing the factors that determine attitude); information technology models (Mason's PAPA model, the ethical behavioral model of information technology use elaborated by Banerjee et al. [13], Chatterjee's model of unethical use of information technology [14], Leonard and Cronan's model of ethical computer use attitudes [15], etc.). Of the latter, the most relevant for our definition of online ethical teaching in higher education is Mason's 1986 PAPA model that comprises four ethical aspects that are essential for the digital era: privacy, accuracy, property, and access. Privacy or confidentiality concerns people's thoughts, feelings, beliefs, fears, and fantasies as well as the ability to hide from others; the information system should not invade the private space of a person. Accuracy is related to the accuracy of information. Property refers to the fact that information systems should protect intellectual property and the flow of information. Accessibility is represented by the idea that information systems should be available to all [16].

Regarding the importance of ethics in online educational environments, to take moral decisions regarding online education, the educational institutes should promote and build a culture of trust, define the ethical and unethical application of electronic contents, and support accurate understanding of privacy and intellectual rights. This implies a common perception of universal privacy and copyright laws and of what an ethical educational environment should be [17].

Online teaching implies teachers working in electronic environments and encountering challenges in terms of providing electronic content, learning facilities, the use of a reliable network, and effective software programs, with network security and ethical issues coming into the foreground now more than ever before. Feng Chen Miao [6] argues that online ethical teaching is ensured when teachers make fair and appropriate use of technology, exploit technological resources effectively, and conduct good activities [6].

At the level of each higher education institution in correlation with university autonomy, there should be a code of ethics as an extension of the already existing code of ethics for face-to-face learning because a series of ethical rules regarding on-site education also remain valid in the virtual environment.

The need for an ethical code may be imposed by the fact that an online community within a higher education institution may include persons of various ages, with different cultural and religious backgrounds, or even diverging opinions and attitudes regarding online education. A common denominator should be found for all these aspects to ensure the best educational process based on a shared agreement concerning ethical norms.

Concerning O2: to highlight the challenges and problems connected to online education from the perspective of ethical technology use by *teachers*, there have been identified two major problems connected to online learning.

Firstly, as full-time online education has only been a recent practice, there are no studies yet to establish the effects and efficacy of online learning [18].

Secondly, the capacity to teach digitally differs according to a wide range of factors: learning goals, educational priorities, availability of technological devices and data connection, the age of learners, etc. [19]. Online education can be effective in digitally advanced countries, whereas, in the communities where an Internet connection and/or technological devices are almost nonexistent or completely absent and families struggle with poverty, online education has come across as a factor generating even more inequalities on the short and long term; also, students accessing the Internet through smartphones do not take full advantage of online education because a relevant amount of online content is not accessible via smartphones. Other problems associated with online education include lack of proper interaction with teachers and classmates; further questions and clarifications on the learning content are usually discussed over the e-mail, which implies even more time effort from both teacher and students; online education does not comply with the tactile learning style of some learners; there is limited to no classroom socialization, students communicate with their fellows digitally, and the real-time sharing of ideas, knowledge, and information among them is not possible in online learning; such aspects define online education as crisis education [20, 21].

Dhawan [22] proposes a SWOT analysis for e-learning modes in times of crisis. The ethical issues connected to online learning are included in the challenges section of the SWOT analysis and mainly refer to the violation of the universal right to equal education: unequal distribution of ICT infrastructure; the doubtful/poor quality of online education as a result of some factors (teachers with poor digital skills, poor Internet connection, obsolete learning content, etc.); the digital divide (the gap between those able to benefit from the Internet and those who are not); technology cost and obsolescence [22, p. 10]. There is a lack of standards on how to make the transition from offline to online learning efficiently, with good time management and proper motivation of students to actively take part in online education, as well as no general rules on e-resources quality, quality control, development, and delivery.

Besides the problems mentioned above, as the use of educational technologies and software tools in the education system has become unavoidable in the current pandemic context, there have also emerged concerns about the ethical use of technology for educational purposes. Thus, the need for the school to teach young people, to develop those modern skills on which an educational action should be based in the twenty-first century, has become imperative.

Another important challenge is to ensure correct and efficient evaluation. If in face-to-face learning the teacher can ensure that the works submitted after tests during the classes are the students', in online education, this aspect can be difficult to control. In online evaluation, the teacher should find solutions for the positive validation of the fact that the paper truly belongs to the student and not somebody else and whether the respective paper is the result of partial or full plagiarism.

About O3: to highlight the challenges and problems connected to online education from the perspective of ethical technology use by *students*, students' voices need to be taken into consideration when it comes to online learning if we want to examine the challenges faced by students [3, 23] and find solutions to issues such as enhancing the quality and efficiency of online learning and diminishing unethical information technology use by students, as well as its consequences.

There is a series of studies on students' perception of online learning in terms of efficiency, but fewer on students' perception of the issue of the ethical use of information technology in education [24, 25]. For example, the study by Anwar and Adnan [25] on a sample of 126 higher education students attending online education in Pakistan found that, among other things, 71.4% of students feel that they are well qualified to use computer/laptop for online learning, 61.1% of students reported that they are comfortable communicating digitally, while 11.1% feel that they face problems in digital communication; 67.5% reported that online learning is way different from conventional learning mode, while 18.3% feel that there is little difference between online and conventional learning; only 10.3% of students feel that online learning is more motivating than conventional learning, while the majority of the students (71.4%) voted against the notion that online learning is more motivating than conventional learning; 50.8% students reported that it is not possible to effectively complete entire university courses through online means, while 18.3% reported that it is possible to complete an entire course through distance learning; 42.9% of students reported that they feel difficulties while doing group projects or assignments through distance education, while 34.1% of students feel that group projects and assignments can be completed digitally; 78.6% of students feel that face-to-face contact with an instructor is necessary for learning and distance learning [25].

We have identified several studies on students' challenges and problems connected to online education from the perspective of ethical technology use [26, 27]. Hamity, Reka, and Baloghová's study, conducted on a sample of 225 students from the State University of Tetova, in Macedonia, revealed that the difference between students who claim to have enough knowledge about online ethics and those who have little or no knowledge about Internet ethics is relatively small, 53% vs. 47%, indicating that nearly half of the students that had declared themselves to be massive users of the Internet did not have enough knowledge about the ethical use of the Internet [26].

Another study also found that undergraduates at higher educational institutions are using information communication technologies in their daily lives but are not taught how to do so ethically, the most common ethical violations in this respect being, as of the pre-COVID-19 pandemic world, software piracy, plagiarism, and cheating [27], with expectations in recent research for such acts to increase in number and relevance in today's full-time online education.

The reasons behind such expectations regarding increased unethical information technology use by students include

– demotivation and diminished interest in online learning as a result of poor to no social interaction and connectivity issues;
– lack of access to physical libraries;

– long hours spent in front of the computer for educational purposes which generate
  a desire to solve assignments quickly and thus reduce the time spent online for
  learning purposes as much as possible;
– lack of proper training on the ethical use of information technology for educational
  purposes (intellectual property rights concerning digital content).

The study by Cilliers [27] found that first-year students understood what software
piracy was but did not think it was wrong to copy software from the Internet; eventu-
ally, they did understand that cheating, while making use of technology, was wrong
and should be avoided.

An example of good practice connected to online education from the perspective
of ethical technology use by students can be provided by Wawasan Open University.

At the level of this institution, created in 2006 and providing distance educa-
tion in the online environment, these measures are stipulated under the "Rules and
Regulations for Information Technology and Facilities" section of the University's
Student Handbook. This guide can be accessed from the student portal and Wawasan-
Learn. The guide sets out rules and measures that students will follow in an informed
manner. Some of the rules regarding the example in a discussion forum concern both
the "tone" of the language in which these messages are written and examples of
messages that are forbidden, advertisements, or messages with a religious or polit-
ical connotation. Other forbidden messages are those that can invade privacy (e.g.,
posting another person's phone number without their permission) [9].

Concerning O4, providing solutions to the challenges and problems connected
to online education from the perspective of ethical technology use by teachers and
students and guidelines on ethical online education to be officially included in the
teacher training curriculum at the national and international level as soon as possible,
based on the literature analysis, there should be reconsidered and reformulated the
ethical codes for academic education to include the approaches to the specificities
of online education in the COVID-19 context.

The study of Basilaia and Kvavadze [23] reveals that the lesson learned from the
COVID-19 pandemic will force a generation of new laws, regulations, platforms,
and solutions for future cases, so that the countries around the world may be more
prepared than they are today [23].

Information security in a higher education institution is an extremely important
element for any device connected to the Internet or connected to an intra/extranet
network [28]. Thus, it must be taken into account that the organization minimizes
the risks regarding the security of the information and data it manages [29]. This
can be done in several ways such as adopting a strict policy on personal data protec-
tion and information security, reporting information security incidents, training all
stakeholders on the importance of managed information and the consequences,
dissemination, alienation of important data, but also the use of materials without
copyright.

Educational institutions, as well as all organizations that have their networks, must
restrict access to certain devices that store vital information. These computers will
only be accessed by designated personnel who will be logged in with a username and

password. Regardless of the work platform, users will be differentiated in terms of access to an application or other information, depending on their responsibilities and duties. Only the zero-level administrator can install or change the settings of a used system or application, and the rest of the users have restricted rights. For example, students participating in a course should not be able to give participation to any other person inside or outside the institution.

Backups of applications, information, and system data should be performed at all times to avoid the risks caused by external factors with or without intention. We mention here power outages, system failure, and hackers.

The information in the system must also be encrypted to be invulnerable. They become illegible and inaccessible to people who do not know about digital information management.

Both antivirus programs and firewall applications will be used to block data communications over a network and/or malicious programs.

Strict measures will be initiated when information is transmitted by e-mail. Thus, antivirus programs must have the option to scan both sent and received messages, including attached documents.

Regarding the activity of direct participants in the online educational act, teachers, and students, but also indirect (parents), the keyword should be *responsibility*. We are the only responsible people in our lives. Improving the quality of online education is closely related to the desire for the personal development of teachers. In general, young teachers are most willing to use digital resources in the teaching–learning assessment process, while older teachers use these methods to a lesser extent and under the influence of external factors [30]. In the new context created by the COVID-19 pandemic, all teachers are forced to use digital resources and adapt to the use of platforms from the simplest, such as e-mail, to the most complicated such as Google Classroom, Google meets, and Microsoft Teams. Teachers work under the paradigm of lifelong learning and adapt to the new context also that involves personal effort.

For Feng Chen Miao [6], to ensure online ethical teaching, teachers should do the following: use technology fairly; effectively exploiting technological resources; appropriate uses of technological resources; demonstrating good activities [6].

The transition to online education involves a fundamental change in the teaching strategies used. Now, the emphasis must be placed on interactive strategies, on the use of didactic methods with a pronounced formative character. Interactive methods are based on action; they are those that require the maximum mechanisms of thought, imagination, intelligence, and creativity. Thus, the teacher must give up the actor–spectator teaching style and encourage cooperation between students, collaboration, expressing their own opinions. The teacher is no longer the transmitter of information, the one who makes the decisions during the lecture, but the one who stimulates the student to discover, to investigate, to develop new skills and behaviors. The student becomes an active participant in his/ her own training and development. The emphasis is no longer on the volume of information transmitted, but on the way of thinking, intrinsic motivation, and cognitive autonomy of the student.

Regarding the evaluations, they can no longer be only summative, but of a continuous type, therefore formative. The problem encountered by teachers is that of cheating/copying by students. In this regard, on the one hand, students must be informed about plagiarism, what it is and how it can be avoided, and on the other hand, assessments must be designed in such a way as to avoid copying. The themes/evaluations must stimulate creativity, originality but also the spirit of competition [31, 32].

The contents of the online lessons must be presented in an attractive but at the same time flexible and engaging form. It is advisable to use experiential learning, learning that stimulates the ability of analysis and creativity of students. The lack of direct contact must be replaced by arousing interest in new knowledge, stimulating imagination, memory, and the power of anticipation, but also the ability to communicate. Given the social distance to which students are subjected, they should be stimulated to solve the assigned tasks individually or in small groups.

In supporting online lessons, teachers may also encounter difficulties in involving students. This is because: there may be members of the group who do not want to expose themselves, due to shyness or lack of self-confidence; some students may be used to waiting for the team's results and then expressing themselves; the lack of interest/experience in the subject of the lesson; monopolizing the discussion by a student who can be seen as an authoritarian leader; due to verbal conflicts between group members; due to the large number of students who are part of the team.

Teachers and students should be made aware of the many advantages and benefits that the human society has from the use of information technology, but also of the possibility that the information technology can be abused by various users to the detriment of other people and, sometimes, of society.

The recommendation of a study by Cilliers [27] is that information ethics must be included in the undergraduate curriculum to prepare students to deal with these ethical problems. To carry out the teaching activity effectively, an ethical guide to online activities should be created. It will be addressed to all parties involved: pupils, students, but also teachers and researchers, and support staff from the institution. An ethical guideline will be useful not only for an educational institution but for an entire education system. Thus, students and teachers will once again be guided to adopt and respect values such as integrity, honesty, and appreciation of truth. Intellectual property and copyright are a central element in teaching and research.

Academic integrity requires that each of the parties involved in the education system act in the interest of the institution and support its strategies and objectives to achieve the mission of education and training. The parties involved also have the obligation to defend the image and prestige of the educational institution, not to harm the image or its interests, to be loyal to the institution, and fulfill their professional duties.

The online ethical conduct guide will be based on universal ethical principles. Among these, we mention

1. the principle of autonomy;
2. the principle of dignity;

3. the principle of fair play;
4. the precautionary principle;
5. the principle of justice.

From these general principles, we can make up a set of rules of moral (ethical) conduct in the form of obligations or prohibitions that indicate what to do/not to do from an ethical point of view.

1. Respect for academic and personal autonomy and freedom, respect for research consent;
2. Respect for dignity in the sense of prohibiting online misinformation, ensuring the transparency of both scientific and administrative information, ensuring intellectual correctness (plagiarism, intellectual fraud are prohibited);
3. Respect for professional integrity, prohibiting mental injury of the persons involved; respect for confidentiality;
4. Fair and non-discriminatory treatment for all pupils/students, reward on merit, elimination of conflicts of interest, rejection of corruption, and abuse.

To implement an ethical guide, it must be disseminated, known, and applied by all students and all teaching and support staff. This can be done with the help of online training sessions with teachers and/or students, parents to study, analyze, understand the rules of conduct online, or with the help of movies, games, and case debates.

4   Discussions

We have systematized our findings for each research objective in Table 1.

As shown in Table 1, there is a stringent need for standardizing laws, rules, and regulations that concern all aspects of online education:

– ensuring curriculum coverage in parallel with a motivational, engaging virtual environment for learners;
– developing high-quality teaching materials, contents, and tools for online education;
– ensuring personal data protection and information security in the virtual environment for both teachers and students;
– ensuring backup applications that may activate automatically in case of security breaches;
– ensuring redundant systems that may be used in "emergency" mode, when the main platform/connection has failed;
– instruct both teachers and students on the ethical use of information technology regularly;
– elaboration and dissemination among teachers and students of a national ethical code of conduct in the online teaching–learning-evaluation process;
– elaboration and dissemination among students of an easy-to-read netiquette poster on communication rules in the online environment; for example, avoid off-topic,

Table 1 Systematization of findings for each research objective

Research objective	Findings	References
O1: definition of online ethical teaching in higher education during the COVID-19 pandemic	– Online ethical teaching as equal access to education – Online ethical teaching as the code of behavior based on mutual respect, justice, tolerance, and goodwill that guides the conduct of the members of an educational institution (teachers and learners) – Online ethical teaching as compliance with the four ethical aspects that are essential for the digital era: Privacy, Accuracy, Property, and Access (the PAPA model)	[9, 16, 33]
O2: challenges and problems connected to online education from the perspective of ethical technology use by *teachers*	– Increased student academic dishonesty in exams and assignments – Concerns about having one's intellectual copyright violated through plagiarism, sharing of one's work without permission, etc.	[9, 33]
O3: challenges and problems connected to online education from the perspective of ethical technology use by *students*	– The challenges faced by students: software piracy, plagiarism, and cheating – Students' perception of the issue of the ethical use of information technology in education is biased or truncated – Challenges and problems connected to online education from the perspective of ethical technology use: poor quality of education and learning content; low level of interaction during online classes; inefficient study time management; exposure to a vast amount of spam, hate, and hoax messages	[3, 23] [24, 25] [9, 26, 27]
O4: solutions to the challenges and problems connected to online education from the perspective of ethical technology use by teachers and students and guidelines on ethical online education to be officially included in the teacher training curriculum at national and international level as soon as possible.	– New laws, regulations, platforms, and solutions for online learning – Information security – Restrict access to devices that store vital information – The differentiated possibility of access – Backups of applications – Encrypted information – Using antivirus programs and firewall application – Personal development of teachers – Use technology fairly; effectively exploiting of technological resources; appropriate uses of technological resources; demonstrating good activities – A fundamental change in the teaching strategies used – Evaluations must stimulate creativity, originality but also the spirit of competition	[23] [28] [29] [6, 30] [31, 32] [27]

insulting, hate or personal-attack messages; do not post advertisements, political and/or religious messages, spam or hoaxes on the educational platforms used by your educational institution; do not share another person's data without their permission (telephone number, photo, address, e-mail) or any other offensive, abusive, racist, and discriminative messages.

Within higher education institutions, postgraduate courses can be held to focus on issues related to the security of activities in the online environment together with the ethical issues involved, to train specialists at the level of each institution. In our country, there are already concerns in this area, and specialists in the field are trying to find solutions to these current challenges. Thus, the Romanian Intelligence Service through the National Cyberint Center, together with the Ministry of National Education and companies in the IT&C field, initiated the steps for the development, adaptation, and implementation of curricula in the field of cybersecurity, at the level of technical universities and in some high schools in Romania. Also, twenty higher education institutions have introduced or are about to introduce in the university program post-university studies (short-term) and master studies dedicated to security in the online environment. The first series of students specialized in this field graduated in 2019 (source https://intelligence.sri.ro/educatia-investitie-securitatea-cibernetica/). The Cyberint Center continues the initiatives dedicated to professional training in the field of security in the online environment, coming to meet the possible legislative changes in the field of cybersecurity at the national and international level—implementation of the Network and Information Systems Security (NIS) Directive and the EU General Data Protection Regulation (GDPR).

Given the special importance that security and ethics in the online environment will have in the educational activities, at the level of decision-making forums there should be considered the possibility of introducing a study discipline through which students are informed about the dangers to which they may be exposed in the online environment but especially how to proceed in such situations.

There is a wide range of the aspects impacted by (un)ethical online education that all the actors engaged in education should be aware of decision-makers in education such as government officials, management staff of educational institutions, members of the academic teaching staff, and representatives of students' unions and students.

5 Conclusions

Although it is too early to generate large scale and long-term results of online education in terms of teaching and learning efficiency, its impact on the physical, mental, and emotional dimensions of human development, we may conclude that online learning is a solution in times of crisis given its potential to send vast amounts of information/learning content to a large number of people in the remotest corners of the world. It has already been hypothesized that online education is not as effective

as on-site education and this is true where the right to quality education is violated due to monetary issues.

In technologically advanced countries, one of the most undesired effects of using information technology in education is its unethical use associated with harmful consequences such as violation of data privacy and intellectual rights, as well as offensive online discourse directed at others. This paper highlights a series of solutions to the above-mentioned problems that should be implemented and disseminated at the level of higher education institutions nationally and internationally; as human rights to property and privacy are universal, so should the standards for the ethical, unharmful use of information technology in education, and not only, be.

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