THE COVID-19 PANDEMIC AND THE ONLINIFICATION OF TEACHING AND LEARNING

Pandemia Covid-19 și transferul predării și învățării în mediul virtual

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THE COVID-19 PANDEMIC AND THE ONLINIFICATION OF TEACHING AND LEARNING

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Abstract

Online education is of various types and can be defined in numerous ways. Over the last few decades, online education has gained popularity, but has also been regarded with reluctance and scepticism as to the benefits it may have. The COVID-19 pandemic was declared on the 11th of March 2020 and forced many countries to impose lockdowns and restrictions. As such, several activities were shut down, schools and universities were closed, thus, the need for rapid solutions arose. Since the online environment was there for the taking, physical classrooms were virtualised overnight, homes became learning and teaching spaces for students and educators, whereas the latter were faced with adapting content and transferring it in order to suit its delivery via online platforms. With little to no experience in online education, educators sought to find ways to continue their work bringing emergency modifications. Although digital transformation is not a new phenomenon, the transit from physical classrooms to online ones has been and still is a rough learning curve for many educators. Apart from optimising digital technology to apply to education, another difficult task of any online teacher is to keep students motivated and involved, which can be achieved in different ways. This article discusses methods of content

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and course delivery, the technology-induced problems that online teaching implies, assessment, ethical behaviour in a virtual setting, and the risk of cheating in online examinations, as well as ways of preventing cheating. Nevertheless, the abrupt onlinification of education may lie at the basis of future exploration and research.

Keywords: assessment, content delivery, online learning, online teaching, student motivation.

Rezumat

Educaţia online este de diferite tipuri şi poate fi definită în numeroase moduri. În ultimele decenii, educaţia online a dobândit popularitate, dar a fost, de asemenea, privită cu reticenţă şi scepticism cu privire la beneficiile pe care le poate avea. Pandemia COVID-19 a fost declarată la 11 martie 2020 şi a forat multe - ari să recurgă la starea de urgenţă și să impună restricii. Ca atare, multe activităţi au fost sstate, printre care şi educaţia din şcoli şi universităţi, ceea ce a dus la identificarea de soluţii rapide. Întrucât mediul online exista, clasele şi orele fizice au fost virtualizate brusc, casele au devenit medii de învăţare şi predare pentru educabili şi profesori, în timp ce aceştia din urma s-au confruntat cu adaptarea con înului şi transferul acestuia pentru a putea fi livrat prin intermediul platformelor online. Cu experienţă puţină sau inexistentă în domeniul educaţiei, profesorii au căutat modalităţi de a-şi continui activitatea aducând modificări. Deşi transformarea digitală nu este un fenomen nou, transziţia de la salile de clasă la cele online a fost şi este încă o curbă de învăţare abruptă pentru mulţi profesori. În afara de optimizarea tehnologiei digitale pentru a o aplica educaţia, o altă sarcină dificilă a oricărui profesor care predă în mediul online este aceea de a menine cursanţii motivati şi implicați în desfășurarea acestora, un aspect care poate fi realizat în diferite moduri. Acest articol discuta metodele de furnizare a conținutului și cursurilor, motivația educabililor, problemele induse de tehnologie pe care le implică predarea online, evaluarea, probleme de deontologie în mediul virtual și riscul de a copia în timpul examenelor online precum și metode de prevenire. Această trecere bruscă a procesului educațiv de la mediul fizic la cel virtual poate sta la baza cercetărilor viitoare din domeniul educației.

Cuvinte-cheie: evaluare, învăţare online, livrare de con inut, motivația educabililor, predare online.
Introduction

The 2019-2020 COVID-19 pandemic challenged all fields of human activity across the Globe. The World Health Organization named the virus responsible for the respiratory infection COVID-19, also known as SARS-CoV-2, on 11th of February 2020, and one month later, a global pandemic was declared by the same body. Shortly after the announcement, a plethora of human activities faced unprecedented changes as a result, among which education shifted from a face-to-face setting to a totally online environment in most countries worldwide. At the moment of writing this article, many countries are still under restrictions and face various types of lockdowns. There is still uncertainty in education systems around the world as to how long institutions will remain closed.

This article presents some theories that are at the basis of online education and explores some of the difficulties encountered by both students and instructors. It is a methodological mélange which reviews significant papers in the literature and presents some of my personal experiences. As a course lecturer and instructor, the genesis of this paper lies in my personal interest in online education and my intention and desire for self-improvement in the field.

1. Online teaching and learning

The phrase online learning was introduced in 1995 and has become more or less synonymous with terms such as e-learning, online education, online courses. However, in terms of online teaching and learning, we distinguish between synchronous and asynchronous types. Synchronous teaching/learning, as the name suggests, relies on real-time interactions between students and learning facilitators, which means that students and instructors take part in the activity simultaneously, whereas the asynchronous type occurs through online platforms without real-time interactions. There are various platforms for synchronous teaching/learning of which we can mention Microsoft Teams, the original intended purpose of which was not educational, but the developers quickly adapted it to suit the needs of education institutions, or Blackboard, previously known as Blackboard Learning Management System released in 1997. MOOCs (Massive Open Online Courses), on the other hand, are particularly suited for asynchronous learning and offer self-paced courses.
Education systems in various countries, regardless of their level of development, had previously approached and tackled online teaching systems, in fact, online education has been around since the 1980s, undergoing a phase of constant maturation in the 90s and 2000s. As evidence stands the great variety of VLEs (Virtual Learning Environments) and UMSs (University Management Systems), MOOCs, etc. In order to cater for larger audiences, MOOCs have gone as far as offering not just courses, but online degrees as well. Some such successful examples that could be included are the giant providers Coursera, FutureLearn, EdX, or Udemy, to name just a few.

Probably the greatest advantage of MOOCs is that the teaching/learning process is asynchronous, as previously mentioned, the reason being that target audiences may be located in different time zones across the Globe, as such, learners can study whenever they find the time. Apart from this, MOOCs are free-access, non-cost, and voluntary learning experiences (Romero-Frías, Arquero & del Barrio-García, 2020). Having completed a few MOOC courses myself, to my mind, one significant disadvantage of some is that several assignment tasks are frequently peer-reviewed, thus, there is little professional feedback on a student’s work/progress. This can be easily put down to the facts that there may be tens of thousands of students enrolled in any one course simultaneously, and that students may enrol in a course whenever they wish without keeping to calendar limitations, or because most such courses are self-paced. As a result, assessment provided by the course tutors would be utterly impossible given the time constraints of any course delivered online. Nevertheless, the flexibility of the courses is one essential feature that contributes to the success of such platforms.

However, while the designers of MOOC courses are professionals and possess valuable experience and expertise in course design, teachers in secondary, undergraduate, or postgraduate education faced the challenge of transferring their work from the classroom setting to an entirely virtual environment, a process which occurred practically overnight in all parts of the world due to the global pandemic. A major problem was the fact that neither the teachers, nor the students were ready for such a sudden shift. While the latter category may have found the transit fairly simple, teachers had to find ways of tailoring content and identifying valuable resources in order to meet the expected learning outcomes, a process which, because of the lack of experience and know-how, was done by improvisation to a great extent (Bryson & Andres, 2020).
Online education was originally regarded as a good-to-have alternative (Adedoyin & Soykan, 2020). The interest in online education has witnessed a change in Europe in the last decade. According to Eurostat, the highest percentage of citizens in the European area who used the internet to do an online course (of any kind) in 2010 was 14% (Finland) whereas the lowest was 1% (Czechia, Croatia, Cyprus, Slovakia) in contrast with 2020 data according to which the highest was 32% (Iceland), with the lowest of 3% (Romania) (Table no. 1).

Table no. 1. Percentage of internet use for online courses in Europe (b break in time series, e estimated, N/A not available)

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Internet use: doing an online course (of any subject) 2020</th>
<th>Internet use: doing an online course (of any subject) 2019</th>
<th>Internet use: doing an online course (of any subject) 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Union - 27 countries (from 2020)</td>
<td>12(e)</td>
<td>8</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>European Union - 28 countries (2013-2020)</td>
<td>N/A</td>
<td>10</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>18</td>
<td>9</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Czechia</td>
<td>9</td>
<td>6(b)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>17</td>
<td>12</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Germany (until 1990 former territory of the FRG)</td>
<td>12</td>
<td>8</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Estonia</td>
<td>22</td>
<td>14</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>16</td>
<td>13</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>13</td>
<td>6</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>26</td>
<td>15</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>N/A</td>
<td>8</td>
<td>5</td>
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<tr>
<td>Finland</td>
<td>29</td>
<td>21</td>
<td>14</td>
<td></td>
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<tr>
<td>Sweden</td>
<td>23</td>
<td>18</td>
<td>7</td>
<td></td>
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<tr>
<td>United Kingdom</td>
<td>15</td>
<td>19</td>
<td>7</td>
<td></td>
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<tr>
<td>Iceland</td>
<td>32</td>
<td>20</td>
<td>9</td>
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<tr>
<td>Norway</td>
<td>17</td>
<td>16</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>N/A</td>
<td>12</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

Source: Eurostat
2. The challenges of the onlinification of education

According to the UNESCO reports, over one and a half billion students from various levels of education could not attend school in April 2020, a number which had fallen under one billion by the 26th of April 2021. As a result, due to the global pandemic, online education became the only solution to reach out to learners in terms of safety and efficacy, consequently, everyone involved in the system had to acquire new skills and adapt to a new teaching-learning model. With the unpreparedness and vulnerability of the education system, Bozkurt and Sharma (2020) termed this solution as ERT, i.e., emergency remote teaching. The pandemic-induced transition of education was done under the circumstances identified by Cutri, Mena and Whiting Feinauer (2020): little or no preparation, the traumatic conditions induced by the pandemic, and the uncertainty whether the transition would be temporary or more permanent. Their study developed and validated a Faculty Readiness for Online Crisis Teaching (FROCT) scale, concluding that the willingness of the participants to revise their teaching practices for online adaptation and delivery may cast some optimism regarding the rapid transition.

A study published in 2017 by Mugo et al. examined the application of the Technology Acceptance Model (TAM) in learning with mobile devices highlighting such features of mobile gadgets such as accessing learning content anytime and anywhere even providing chances for individualised learning. As proof stand the plethora of mobile apps that can be found in the AppStore for iOS devices or Google Play for Android ones, with apps such as Google Meet, Google Classroom, Blackboard, Canvas, Zoom, Microsoft Teams. While not all of these apps were initially developed for educational purposes, developers quickly adapted to the growing need of schools and universities adding features that would facilitate student-teacher communication and cooperation as well as assessment.

Nevertheless, there are cases of students who did online courses prior to the pandemic, thus, they may have been more prepared, at least from a digital skills perspective. A study based on the answers to a 14-item survey of 587 online learners of whom over 90 percent had previous experience in online learning found that the majority preferred in-person courses (Jones, Vidal & Taylor, 2020). Another study by Joosten and Cusatis (2020) states
that students enrolling in online courses may have different levels of readiness and preparedness which may influence the success of the participants. Yet, institutions can provide students with various resources in order to assess their readiness, an offer which, unfortunately, was not made available by most education institutions once teaching moved online due to the global pandemic of early 2020.

Nonetheless, this unpreparedness does not only come down to students, it has played a significant part among teaching staff as well. Because of the sudden onlinification of education across the world, there was little time to offer students and teaching staff the necessary prerequisite to be able to make the most of the teaching-learning process.

2.1. Challenges for instructors

However, in order to be successful, online instructors need constant training and support (Brinkley-Etzkorn, 2020). Such training can help to address various problems, misconceptions, concerns, or worries that instructors may have about delivering online courses. Online teaching should, ideally, identify the technologies and means that suit pedagogy, it is not the mere adaptation of pedagogy to the tools that technology has to offer.

A distinguishing feature of distance learning is that it separates learners and teachers. If teaching were simply a matter of imparting information or transmitting structured knowledge, it could simply be transferred to an online medium. In fact, if this were all that was involved in teaching, everyone who watches well-structured documentaries or regularly listens to factual podcasts would be well-educated. Distance education is characterised by a specific separation of teachers from their students, a separation which affects both teaching and learning. This separation imposes a psychological and communications space which can have such flaws as various misunderstandings, it lacks body language, it lacks eye contact, and many other characteristics of face-to-face interaction. Moore (1993) named this psychological and communications space the transactional distance.

Furthermore, Mor and Craft (2012) define learning design as ‘the act of
devising new practices, plans of activity, resources and tools aimed at achieving particular educational aims in a given situation’. The benefits of learning design became particularly apparent during the COVID-19 pandemic when educators and institutions, urgently needing to move from face-to-face to remote teaching, had to seek guidance from others who were more experienced in teaching online and at a distance. Learning design has offered a way of sharing ideas in a format that allows for a methodical yet swift adaptation of lessons and courses for delivery in a variety of settings and contexts, and, most of the times, to a variety of learners.

Conole (2014) defines learning design as a methodology that enables both teachers and designers to make more informed decisions in how to tackle the design of learning activities and interventions, a design which is pedagogically informed and makes effective use of appropriate resources and technologies. Her approach regarding the 7Cs of learning design is structured around seven activities:

• conceptualise
• create
• communicate
• collaborate
• consider
• combine
• consolidate.

Online courses are often designed by starting with objectives and existing course outlines usually borrowed from face-to-face courses (Baldwin, 2019). The next stage is the identification and evaluation of resources used in face-to-face courses which help to guide the design of online course. This is followed by structuring and chunking of the course, and changes are often implemented as a result of student feedback.

However, the COVID-19 global pandemic that spread with menacing speed did not allow instructors and designers to thoroughly revise course contents and to smoothly shift education from a face-to-face setting to an online environment, the transition happening literally overnight in most parts of the world and finding both students and instructors entirely unprepared. Thorough preparation preceding this transition would have definitely rendered a much
better teaching and learning experience, however, there was little or no time whatsoever in order to continue education instead of bringing it to a halt.

2.2. Challenges for students

Yet, online education has several potential risks for failure. Apart from the unpreparedness of both instructors and students to shift to a virtual environment, we have to bear in mind that students in lockdown may feel a lack of sense of belonging and connectedness. For example, students at the beginning of a new cycle may not have had the chance to know one another, to make friends with their peers in the few months prior to the onset of the pandemic. This lack of connectedness may make them feel as if they did not belong to that particular group of course participants.

On the other hand, one family may have several members who are students enrolled in different courses and specialisations. They may have difficulty to be online simultaneously in cases there is only one device that they can use. Another problem in a similar situation would be the lack of physical space, we may be dealing with twins who have always shared their bedroom, thus, they may not find a different place to be able to attend a course. I personally have had twins attending my lectures, both of them physically being in the same room. It is utopia to expect that, in this case, the twins would work independently and individually in case of an assignment.

Moreover, we have to take into account the economic background of students, there may be individuals who could not replace their old laptop or computer overnight because of financial constraints. While most students own a mobile phone and platform developers quickly adapted their web-based applications and software to run on mobile devices, features of mobile apps may be limited and, for example, in order to complete an assignment which opens in a new browser window may send the running app in the background and disconnect or log users out from the app.

Even more, not every student may have stable and constant broadband connection. While connectivity should not be an issue in an urban environment, rural areas may be out of coverage, thus, students would have difficulty to get online when the courses are scheduled.
Although in the 21st century Europe we would not expect power cuts, unfortunately these are not a thing of the past, one such event occurred as recently as January 2021 affecting the north-west area of Romania.

We cannot ignore the fact that many families faced financial difficulties due to the closure of various activity sectors. Hence, some students had to find ways of keeping afloat by taking jobs such as home delivery of food or groceries. With more or less flexible working hours, such students may be unable to attend courses.

Consequently, there are many risks and challenges to be taken into account at every step of online education, from planning and design to delivery and participants.

3. Ethical behaviour and academic dishonesty

Two important facets of the problem that ought to be mentioned are ethical behaviour in e-classrooms and academic dishonesty, which, to a certain degree, falls under the concept of ethical behaviour.

There are various reasons why people act the way they do, whether the consequences of their actions are taken into account, what principles guide ethical behaviour. In the opinion of Smith (2012), four major ethical theories can influence ethical perspectives in online classes: subjectivism, cultural relativism, utilitarianism, and Kantian ethics.

As far as subjectivism is concerned, people are educated differently and grow up in different circumstances, as a result, ethics may be a personal opinion, one perceives ethics as simple statements of personal opinions and attitudes. Consequently, one person may perceive cheating as inappropriate behaviour, while for others cheating may be acceptable. From a subjectivism point of view, both perceptions are ethically correct.

On the other hand, according to the cultural relativism theory, which focuses on the dichotomy between right and wrong from various cultural perspectives, there is not one ethical standard that could be applied to all cultures. As such, what is acceptable in one culture from an ethical point of view might be considered
unacceptable if the action occurs in another culture bound setting. This may be the case of two students, student A and student B, for instance, who are located in different geographical areas. Student A can always be online during classes, while student B may log in with considerable delay because, probably, the class is delivered at 3 a.m. where student B is. From the point of view of student A, student B deliberately arrives late “to class”, whereas student B considers it natural to be unable to get online at that time of the night.

Utilitarianism is the belief that the consequences of an action are the foundation of ethics. Thus, utilitarianism focuses on the benefits of most people. As for an example, instructor A may consider that handing out course material before the course will be beneficial to students and their results will be better, consequently instructor A will also be praised for his/ her work.

According to Kantian ethics, the principle behind the action illustrates ethical behaviour and moral worth. Consequently, all rationality must follow the categorical imperative, which is itself based on the duty to follow what is right in all circumstances. For example, a student may consider that cheating in an online examination is fine as long as cheating is not identified. If the motivation is cheating, but the student will not resort to it for fear of being caught, then the student’s act is rooted in inclination and not necessarily duty, as such, from a Kantian perspective, the student has no moral value. Avoiding cheating because one knows that it is wrong proves ethical actions and moral duty.

As such, it is very difficult to draw the line between what is right and what is wrong from an ethical point of view. There may be all types of variables across cultures, for example, which influence people’s decisions to resort to academic dishonesty or to prevent it.

Colnerud and Rosander (2009) identified increases in levels of academic dishonesty in Sweden; the authors pinpointed the three conscious and deliberate forms of academic dishonesty: deception, self-deception, and ignorant deception, under the three official Swedish main categories: cheating, unauthorised collaboration, and plagiarism and fabrication. Academic dishonesty may be encouraged by the lack of clear rules on academic integrity, the lack of clearly stipulated sanctions, enforcement, and penalties (Dendir & Stockton Maxwell, 2020).
Although cases of cheating may be underreported due to the fact that people rarely admit to their own cheating (Wenzel & Reinhard, 2020), numbers of academic dishonesty cases may be much higher. Cases of cheating involve using cheat sheets, copying answers, collaboration, or plagiarism.

Wenzel & Reinhard rely on the two economic model theories: the rational choice one and the strain one. According to the rational choice theory, it is the individual’s decision whether to employ cheating methods after weighing the benefits, such as higher marks, less work and effort, etc., and the costs of such behaviour, for example feelings of guilt and immorality, the risk of being caught, etc. The strain theory lists the following underlying reasons: negative affective states, experiencing negative stimuli, anger, anxiety, etc. Oftentimes, the two theories together may explain most cases of academic dishonesty, cheating, or deviant behaviour.

3.1. Cheating in online examinations and its consequences

The internet is a vast source of information which may provide answers to a plethora of questions. As such, it should come as no surprise that students rely on it in order to find solutions to questions during assignments or examinations. However, when it comes to cheating during e-examinations, the problems are diverse. Probably one of the major concerns here, depending on the type of assessment, is plagiarism. While plagiarism should be unacceptable in any instance, there may be circumstances when it is the only viable solution to some students. A study by Amigud and Pell (2020) points out that personal issues that might put in danger students’ lives or their studies are the loss of immediate family members [or] sudden accidents which may make students resort to plagiarism under the psychological burden or because of time constraints, improper time management, lack of or low motivation, fear of failure (Kang & Zhang, 2020), lack of interest, pressure to perform, lack of clarity in the course, psychological disposition, etc. (Dendir & Stockton Maxwell, 2020). This can easily be the case of many students who face various difficulties in such harsh times as a global pandemic.

Depending on the nature of the discipline, students may rely on translations in the same language or even cross-language plagiarism (Marin-Lacarta,
Such cases may easily occur in a translation class or even an anatomy one. Having taught a medical translation course, I can ascertain that students turn to such machine translation as CAT tools or simply Google translate to complete tasks. Nevertheless, such problems can be avoided during oral assessment which would prevent the students from relying on machine translation once video cameras or screen sharing features are turned on.

A remarkable case of cheating in online examination has recently been under analysis at the University of Bucharest, Romania. According to the statement of the Board of the Faculty of Law, 45 students were caught cheating during the February 2021 online examination, and, as such, the Board proposed to expel the incriminated first year students and forwarded the proposal to the rector of the university. The students’ method, according to the statement, was rather easy, they used the group feature of WhatsApp, exchanging answers and collaborating during the examination. This fraudulent behaviour is a very serious case, even more because it occurred at the Law School, an institution that teaches justice and fights injustice. By the 2nd of March, the 45 students had been expelled from the university. However, as of the 16th of April 2021, one student sued the University of Bucharest, and the Court of Constanța suspended the execution of the Rector’s Order, the student being admitted to courses. The trial is yet to take place.

Another study based on questionnaires and interviews, found that both students and teachers perceived cheating fairly easy in e-exams. Nevertheless, there are diverse ways of avoiding, or at least reducing, cheating during online examinations. A starting point would be asking students to submit a signed conduct statement, something that can be done even during harsh times such as a global pandemic. Other ways can include: questions that make students think rather than using simple yes/ no questions, open-ended questions that need some sort of explanation or argumentation, using huge question banks, randomising questions and answers, etc. (Rennell, 2020, p. 122). To support this point, a study by Rybinski and Kopciuszewska (2020) states that automated text analysis, as a feature of artificial intelligence (AI), can be implemented in higher education to grade essays and written examinations because it can detect plagiarism or automatic text summarisation. The study that analysed over 1.5 million student reviews concludes that the future will most likely witness the adoption of AI tools for
assessing students’ work. This should come as no surprise because the trend of higher education institutions is to diversify the types of courses offered and to enrol as many students as possible, first of all, we have to admit, due to financial reasons, and, secondly, in order to keep up with the demand of the labour market for skilled and highly trained specialists.

One way of avoiding plagiarism and cheating in online examinations, but also for various assignments, is the use of an honour code system and raising the awareness of the students regarding academic misconduct (Dendir & Stockton Maxwell, 2020). An honour code system can be presented to students at the beginning of the course exemplifying both situations of academic dishonesty and their consequences, the most serious of which is expulsion. Another way of discouraging plagiarism is to have students tick a compulsory/required checkbox during an e-examination stating that the work they are to submit is their own and has not been plagiarised. These methods may not entirely eliminate situations or cases of academic dishonesty, but will undoubtedly decrease the numbers of such occurrences.

**Conclusion**

Unlike the Spanish flu, the COVID-19 pandemic occurred at times of unprecedented technological development and advancement. National lockdowns forced the onlinification of teaching and learning, a process which in most educational systems was done without prior preparation, experience, or training. While many courses can be conducted online in synchronous or asynchronous ways, online teaching and learning has its flaws and downsides. The fact that nearly the entire Planet was faced with the sudden transfer from the physical classroom to the virtual environment will undoubtedly lead to extensive research in this field, and, probably, the most successful education systems of the future will implement new methods and strategies to reach out to even more students with more cost-effective ways and to make the online teaching-learning experience a truly beneficial one, which, nevertheless, implies training both teachers and students to gain the required skills.

Online teaching and learning also has its flaws and drawbacks, there are multiple aspects to be taken into account. Students may be having difficulties
of various types, such as connectivity problems, different time zones, distress brought on by family issues, lack of privacy, to name just a few.

The sudden onlinification of education has brought to light countless examples of good practices and methods of online course delivery. The internet now abounds in tips and advice to which both learners and students can turn whenever in need. Nevertheless, online education may flourish and develop further as much research in the field of this new normal is yet to be conducted.

However, our hope is that, in a few decades’ time, we will not refer to the current students enrolled in schools or higher education institutions who are being educated more or less exclusively online as an experimental generation which could have benefited much more from online education.

NOTES

1 https://cutt.ly/8bEwuY1

References


