

# **SARS-CoV-2 and its impacts on educational systems. Some insights from the Portuguese situation<sup>1</sup>**

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## **1. Introduction**

When the novel coronavirus (severe acute respiratory syndrome coronavirus 2 – SARS-CoV-2) first emerged in December 2019, the world was not prepared for what came right after. The virus quickly spread across Europe and, in a few weeks, strayed into a planetary scale. The world realised that this deadly virus was unlike others of the kind, which only attacked distant and underdeveloped countries with a poor health system. Now, the whole world was facing an enemy that hit almost all countries worldwide, with different degrees of intensity, showing no country was safe, regardless the strength of their economy or the development of their healthcare system. Governments quickly put in place measures that sought to prevent COVID-19 from spreading, but, in a few weeks, the number of infected citizens and the death toll was daunting.

Thus, the world had to quickly adapt to this reality, as this scenario is expected to remain dynamic (Abajo, 2020). Supra-national entities such as the World Health Organisation (WHO) – that declared the state of pandemic (Teles, 2020) –, the United Nations (UN) and, at the European level, the European Union, as well as national governments, swiftly took severe measures that aimed to contain the spread of the virus. Yet, the face of the planet changed almost overnight, as – borrowing a phrase from a popular band – it was the end of the world as we knew it. While the changes traverse the whole spectrum of society, in the economic, societal, environmental and other spheres, the focus of this opinion piece is the educational arena in Portugal, notably the changes that took and are taking place, the strategies put in place, the hindrances, and the opportunities that are emerging with this shift in the educational paradigm.

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<sup>1</sup> This opinion piece draws from the article *The global crisis brought about by SARS-CoV-2 and its impacts on education. An overview of the Portuguese panorama*, published in *Science Insights Education Frontiers*, vol. 7, no. 1. <http://doi.org/10.15354/sief.20.ar039>, with updated statistical data.

## **2. COVID-19 – Some notes**

The last global pandemic that the world has witnessed was the Spanish flu, caused by the influenza virus H1N1, from January 1918 to December 1920. This pandemic infected around 500 million people and claimed the lives of between 50 and 100 million people across the planet, which made it one of the deadliest pandemics in human history. After this pandemic, others broke out, such as H5N1, H1N1, Ebola, MERS-CoV and, more recently, the Zika virus, but with far fewer casualties than the Spanish flu.

Currently, the planet is experiencing a similar pandemic, caused by the SARS-CoV-2 virus. Since its first emergence in China, it rapidly spread across Europe, with Italy being the first severely hit country (where the death toll is already higher than in China), followed by Spain, the UK, France, Germany and a bit across all European countries. Countries in the North and South American continent have also been hit by the virus. On March 11, 2020, WHO's Director-General declared COVID-19 a global pandemic. Since then, and as of April 22, 2020, 2,471,136 confirmed cases of COVID-19 and 169,006 deaths were reported worldwide (WHO, 2020, online). This is indicative that this virus is highly contagious, spreading rapidly through contaminated objects (e.g., elevator buttons or restroom taps) or virus aerosolization in a confined public space (e.g., restrooms or elevators). Furthermore, several countries are striving to develop a vaccine, but there is a significant time frame between its creation, development, testing and mass production, and its use by the population at the global scale. For the time being, there is neither an available vaccine nor strong evidence on the effectiveness of potential therapeutic agents (ECDC, 2020a, online). Thus, other measures have been put in place by many countries to mitigate the impact of the epidemic: social distancing measures (notably, the immediate isolation of symptomatic persons, the suspension of mass gatherings, social distancing measures at workplaces and schools' closedown); ensuring the public is aware of the seriousness of COVID-19; prevention and control of COVID-19 in hospitals and long-term care facilities; the training for all staff of healthcare facilities; rational approaches to limited resources; and surveillance systems for detecting cases and assessing community transmission (ECDC, 2020a, online).

## **3. The Portuguese reality**

### ***3.1. Current situation***

As of April 22, 2020, Portugal recorded 21,982 citizens infected and 785 deaths. The North of the country (with 13,150 positive cases and 454 casualties), the region of the capital, Lisbon (5,093 positive cases and 138 casualties) and the Centre of Portugal (3,053 positive cases

and 175 casualties), are the most affected by the disease (DGS, 2020a, online). The Portuguese government swiftly put in place measures and a national plan to prepare for the pandemic and respond to it as effectively as possible (DGS, 2020b, online). This pandemic will certainly have (and, in some cases, is already having) a profound impact in all contexts, namely the societal, economic and environmental ones. However, the focus of this opinion piece is the educational arena and the changes underway in Portugal. This is addressed next.

### ***3.2. The impacts of COVID 19 in the Portuguese educational system and government measures to mitigate them***

Portugal learnt from the unfortunate experience of other European countries, especially Italy, and closed down all educational institutions, from pre-school to higher education, on March 13, 2020. Before that, several higher education institutions (HEIs) had closed their campuses due to the emergence of the coronavirus, which infected members of the academic community. Live classes were suspended, as well as live student tutorial support. These activities started being developed via the Internet, and HEIs used their specific internet platforms (e.g., Moodle) or other online tools, such as Zoom, for example, and e-learning became the only possible formal learning overnight. At the remaining educational levels, the government created a website where teachers have access to several online tools (e.g. Simple Scripts, Colrd, Inkscape and Sketchpad, just to name a few (Portuguese Republic, 2020a, online). Furthermore, teachers also use the e-mail to send students exercises – which they complete and return also by e-mail – and synchronous sessions through Google Classroom or Moodle. In many schools, students carry out online tests and livestream the presentations of the exercises they prepare at home. With these measures put in place, the Portuguese Ministry of Education seeks to ensure that the regular school year and student learning are not jeopardised or, at least, the negative consequences of schools' closedown are mitigated (Portuguese Republic, 2020, online).

### ***3.3. The hindrances***

Portugal has been preparing its population to the technologic advancements. The government's major strategy encompasses the Portugal EnCoDe.2030 programme, whose main goal (and, simultaneously, challenge) is to train and qualify the Portuguese population in digital competences (Portuguese Republic, 2020b, online). Yet, this project is rather recent, and much has still to be done in technologic and digital terms. Only 71.5% of Portuguese households have a computer with a broadband Internet connection, that is, one in four Portuguese citizens does not have a computer at home (PORDATA, 2020, online). With the government and schools

assuming that all students (and teachers, for that matter) have access to a computer with an Internet connection, this may be a serious hurdle, even more so because the country is on complete lockdown as of March 18, 2020 (Decree no. 2-A/2020) and students/teachers cannot leave their homes to go to a library, for instance.

The reality of the conditions, both in terms of lack of training and competences and technical equipment on the part of teachers – which, ultimately, entails that they have to buy the necessary equipment with their money – and also the lack of a technical structure at the national level that allows such a large number of people in simultaneous online connection, seems not to be the most conducive to successful distance learning. The same applies to students, given that, in general, the most disadvantaged are those who need more monitoring. An example taken from a March 26, 2020 news story is illustrative of this reality:

“Teachers are getting exhausted, after more than a week of distance classes due to COVID-19. They had to adapt ways of teaching and even buy equipment and licenses to use online tools [...]. Teachers had to reinvent ways of teaching and, for many, digital platforms were unknown ground. At least, until last week” (SIC News, 2020, online).

#### **4. Final remarks**

The emergence of COVID-19 caused by the SARS-CoV-2 virus at the end of 2019 changed the face of the world. Deep consequences are being felt across the whole world at all levels, notably at the educational one. The portrait of Portugal and the status of the education provided to its citizens show that the government worked hard and quickly to seek to overcome the potential negative effects of the SARS-CoV-2 pandemic in education at all levels. There are difficulties to face, mostly because digital competences, computers and access to the Internet are not widespread through the Portuguese population. Some questions need to be put, and the answers to them will dictate the success or failure of this novel educational system: is the country prepared for a hypothetical closedown of all schools extended in time? Do all students in compulsory education have access to a computer with access to the Internet? Are parents prepared to support their children, encouraging them to study and monitoring their learning? Has the necessary investment been made to provide schools with adequate and safe e-learning platforms and tools? Has there been a correct teacher training plan in recent years that enables these professionals to teach in the e-learning modality, not only in terms of technological competences but also in teaching-learning strategies? Can parents stay at home to support and help their children without being cut on their payrolls or even put their jobs at risk? These are issues that need to be carefully thought about.

However, the reality that the country is experiencing, brought about by the coronavirus, should not be viewed as a set of hurdles, but rather as a challenge and an opportunity to change and to innovate in the educational and pedagogical field. Whether Portugal is ready to fully embrace this challenge remains to be seen.

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