# Acceptance of Online Education in Portugal and in the World: Before and During Covid-19

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**Abstract:** *The model of education in Portugal and around the world is changing. Online education is not accepted by all, and it loses quality whether or not it is in a pandemic scenario. Therefore, this work of analysis and discussion aims to find out which the measures are most appropriate to be adopted to protect public health and at the same time maintain the quality of teaching and acceptance by all. The solution is based on a mixed teaching model, that is, some face-to-face classes and other in distance and e-learning classes, because online education has worse learning results than face-to-face education, according to experts in the field.*

***Keywords****: Online Education, Education Acceptance, Education and covid-19, Distance Learning, Face-to-Face Learning, E-Learning.*

## I. Introduction

The teaching model as we know is changing. For more than 500 years, teaching has been done by a teacher in front of a blackboard and by students facing the teacher. Classroom structure today, with the exception of a computer or an LCD projector, looks remarkable unchanged, i.e., the teacher at the front, students in rows, as the conventional learning system [4][8]. However, there is an increasing need for teaching to be online. Secondary and professional courses, higher courses, and graduated courses where academics hold online meetings with teachers and post-graduates are mixed (*B-learning*) or are completely online (*E-learning*). A lot of classroom learning that initially were in-person were now moved to a mixed model of *B-learning*[1] and with the current pandemic situation of the coronavirus[2] of the year 2020 even courses in which the teaching model mixed or hybrid were moved to a completely online model, i.e., *E-learning*[3] or distance learning. The acceptance of teaching has also suffered ups and downs, according to the needs of students, parents, and teachers. Meanwhile, education is increasingly supported totally or partially by technologies, communication tools, *email*, *social networks*, *moodle*, and *classrooms*, which are online, i.e., by technologies, products or services centered on the Internet [3]. The future of education emphasizes new technologies, e.g., ubiquitous computing devices, flexible classroom designs accessed by smart systems, such as smartphones, and innovative visual displays [2].

This discussion on the acceptance of the online teaching model is crucial to be carried out in order to provide institutional *decision-makers* and other interested parties with the information that will allow them to position themselves more adequately in relation to the audiences that seek or may come to seek this type of teaching, specifically students who intend to attend online

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[1] Blended learning is derived from e-learning, but most of the content is transmitted in a distance course, usually includes face-to-face situations, hence the origin of "blended", something mixed or combined, also known as hybrid or semi-face teaching.

[2] Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people infected experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness [15].

[3] E-learning or online learning.

education [3]. It is evident that the ingredient that forced online education is the pandemic scenario of the coronavirus that trained everyone, students and teachers to safeguard themselves, and anti-socializing as a rule matters by the authorities and recommendations of the general direction of health at the international level, which caused challenges and open several opportunities. Therefore, this article is useful to reflect on the acceptance of distance learning before the pandemic, during the pandemic, serving as an indicator to predict what will be the acceptance after the pandemic, as well as its pros and cons.

The rest of the paper is organized as follows. Section II presents questions and issues about the acceptance of online education. Section III it is a talk about online education, online learning and distance learning. Section IV is the work core with the analysis and discussion of the main research lines followed by the last section the conclusion and forecasting in Section V.

## II. Questions and Issues

Some questions about the acceptance of distance and non-face-to-face education are necessary to be raised because there are students and teachers who are against this model of online learning, but others are in favor. Then, parents and guardians of their child's education are left with doubts about the quality of teaching, but the coronavirus pandemic forces all teaching to be online and antisocial. What to do?

a) What are the appropriate measures to adopt to safeguard public health and maintain the best quality of teaching and acceptance by all?

b) What is the public's perception about online education from a young age to adulthood?

We must also consider issues associated with the infrastructural aspects, didactic material databases, pedagogic considerations, and the need to associate the usefulness of technology to enhance the experience in e-learning environment [7]. For lecturers and students, the implications of e-Learning are extensive. Increasingly universities must provide quality and flexibility to meet the diverse needs of students. This will inevitably involve tailoring courses to suit differing educational needs and aspirations. Moreover, Schools, universities and other learning institutions need to consider cost-

effective and efficient methods of operation if they are to survive and be better accepted by students [7].

## III.    About Online Education

Since the Internet was created, a huge set of opportunities have opened for new forms of communication and the formation of knowledge at a distance. Connectivism is one of the most important network learning theories that have been developed for e-learning environments [1]. Over the last decades, online and distance education has become an increasingly prominent part of the higher educational landscape [6][7][8]. Many learners turn to distance education because it works better for their schedule and makes them feel more comfortable than traditional face-to-face courses [9]. However, working with distance education presents challenges for both learners and instructors that are not present in contexts where teachers can work directly with their students [5]. Meanwhile, online education may include: (i) *E-learning* (online teaching, face-to-face teaching with online content), and (ii) distance learning (formal courses with flexibility temporal space technological mediation, MOOC[4], OER[5].

Both of online education, the online learning and distance learning require similar online learning tools. The key difference is location. With online learning (or e-Learning), students can be together in the classroom with an instructor while working through their digital lessons and assessments. When using distance learning, students work online at home while the teacher assigns work and checks in digitally. Online learning will involve in-person interaction between you and your students on a regular basis. This is because online learning is used as a blended learning technique along with other teaching strategies. Distance learning includes no in-person interaction between teachers and students. However, you'll likely rely on digital forms of communication such as

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[4] Massive open online course is an online course aimed at unlimited participation and open access by Internet.

[5] Open educational resources are freely accessible, openly licensed text, media, and other digital assets that are useful for teaching, learning, and assessing as well as for research purposes.

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messaging apps, video calls, discussion boards, and your school's learning management system. Other difference is the teaching strategy. Online learning is designed to be used in combination with a variety of other in-person teaching methods. It is a supplemental way of mixing things up in your classroom to provide a variety of learning opportunities for your students.

Distance learning is a method for delivering instruction solely online, not as a variation in your teaching style. Online learning is an excellent way to increase student engagement when used as part of a blended learning technique. Blended learning involves using a variety of instructional resources and teaching methods in order to deliver content in multiple ways. Second, using online learning tools makes it easier for you to differentiate your instruction. Otherwise distance learning can continue without disruption even in events like snow days or the COVID-19 pandemic. Because you were already teaching remotely, these types of interruptions don't affect your classes in the same way as traditional in-person classes. In addition, distance learning provides greater flexibility for students to work at their own pace and review work as needed. This also ties in with the fact that students can access your course material at the times that work best for them, which is important for students who may have irregular work schedules [24].

## IV.    Analysis and Discussion

The Internet changed the way people communicate, shop, socialize, do business, and think about knowledge and learning, thus, distance learning and online schooling is changing the face of traditional classrooms and making education more accessible than ever before. Online education is a form of education where students use their home computers through the Internet for teacher/student interaction and the distribution of class materials [22][23]. About this topic Elaine Allen and Jeff Seaman researched the online education in the United States. They evidenced, the number of students taking online courses continue to grow. For instance, 90% of academic leaders believe that it is "Likely" or "Very Likely" that a majority of all higher education students will be taking at least one online course in five years'

time. Two-thirds of chief academic officers believe that there will be substantial use of student-directed, self-paced components in future online courses. Less than one-third of academic leaders believe that there will no longer be concerns about the relative quality of online courses [23]. For many nontraditional students, among them all those who want to continue working full time or raising families, online graduations and courses have become popular in the past decade. Often online graduation and course programs, some of which are conducted using digital technologies, are provided via the online learning portal of the host university [22].

There are many technologies at the disposal that teachers are using for distance learning and online learning, for instance, classes are given synchronously through video conferencing (tools such as Zoom©, Google Meet©, Cisco Webex Service©, etc.) and asynchronous form (Google Classroom©, Moodle©, social networks, etc.) among others, such as discussion forums, chats, etc. However, there are always students who do not participate actively and even at a distance are introverted and antisocial. A student who does not participate in discussion forums, failing to complete tasks is a clear sign of dismemberment [13], but information about these dismembered behaviors is not always available to instructors and more subtle ways of negative affect (such as boredom) is difficult for a distance teacher to be able to identify and diagnose these students. As such, a distance educator has additional challenges compared to a local instructor in identifying which students are at risk to provide individual attention and support. This is not to say that face-to-face instructors always act when a student is visibly detached or unmotivated, this is where the online education model is challenged and not accepted by all students and parents [5].

George Siemens and Phil Long investigate about the future of education. Educators, students, and administrators need a foundation on which to enact change with the help of new technologies, such as flexible classroom designs, and innovative visual displays, i.e., in person or online. For educators, the availability of real-time insight into the performance of learners including students who are at-risk, can be a significant help in the

planning of teaching activities. For students, receiving information about their performance in relation to their peers or about their progress in relation to their personal goals can be motivating and encouraging improving the quality and value of the learning experience [2]. George Siemens theorized about learning processes in the digital age, which involves planning, researching, and implementing social network technologies, with a focus on systemic impact and institutional change. With his work he explores the pedagogical possibilities of the new information and communication technologies. To this end, he proposed Connectivism, which presents itself as a new teaching-learning paradigm that is an exploration of how the context and characteristics of knowledge have changed and what that means for today's organizations [4].

In a debate on the education future, which brought together ministers and experts to discuss topics such as remote education, digitalization in education and the model for the next school year (2020-2021), the participants stressed that distance learning *"will not be practical"* [10]. This debate arose due to the need for school reorganization imposed by the coronavirus pandemic in Portugal. For instance, education minister Tiago Rodrigues praised the *"remarkable"* way in which schools and professionals "adapted their distance learning plans", a change he considered *"drastic"*. *"Teachers are aware of the difficulties and have found best practices to address all problems. The pandemic showed a great capacity for resilience and maturity in the Portuguese education system"*, said Rodrigues. But he confessed that we are going back to classroom teaching and making an effort so that preschoolers can also return [1].

Digitization, remote education, and digital literacy were already part of the evolution of education, but the covid-19 outbreak ended up anticipating some of the provisional solutions in a time of social isolation. Despite the uncertain future, there is a consensus opinion among the various experts that teachers will continue to be irreplaceable. There are many uncertainties in the pandemic year. One of the possibilities is mixed education, divided between classroom and online classes. Regarding technology and tradition, the professor at Instituto Superior Técnico, Arlindo Oliveira, a *"hybrid"* model will always be

transitory. *"The pandemic has accelerated technological skills, facilitated distance learning, but in practice, it will not change the education model so deeply, that after 500 years it is still based on a teacher in front of dozens of students"* [1].

According to the latest OCDE International Student Assessment Program, a fifth of young Portuguese people have basic reading difficulties. Intervention for digital inclusion is essential. Because according to the National Statistics Institute, more than 5% of students under the age of 15 do not have Internet or a computer at home. If students could access to Internet, they will have several tools to help them, for instance, though discussion forums provide an opportunity that many students use, and in fact some students are more comfortable seeking help online than in person [12]. It is essential to invest in quality education, a good demanding, organized and progressive curriculum that draws students into the 21st century, with good textbooks, frequent assessment, and technological support. But we cannot leave behind young people with reading or math difficulties, But with all the diversity of technologies that can be available to students to learn and interact online, information overload due to human limitations must always be avoided, because if the volume of information exceeds certain limits, social acceptance decreases, causes noise, and distractions [16] [17].

A study by Martinho, et al. assess the acceptance of distance learning before the pandemic revealed that 77% of respondents to a questionnaire intended to use online learning. The questionnaire was answered by 732 university students who attended the face-to-face teaching of the first cycle of the degree in 11 higher education institutions [3]. These findings on the acceptance of online education (total, partial or mixed), supported by web-centric technologies are important, because they can provide institutional decision-makers and other interested parties to deal more appropriately with the audience that intends to attend online education.

Hannay and Newvine made a comparison of online and traditional learning to find which is the perception of distance learning acceptance [9]. They utilize a 22 questions survey with 217

respondents, who were primarily adult and part time students. The research examined why students chose distance education, and student perceptions of the quality and difficulty of those courses as compared to courses taught in the traditional classroom. The data indicate that students strongly prefer distance education, largely because it allows them to balance their other commitments more easily. Respondents also perceive that they achieve higher quality educational outcomes in the distance learning environment. They do not believe that they sacrifice a quality education for the convenience of utilizing distance learning. While distance learning may be most appropriate at colleges and universities with large numbers of adult learners, and part time students, there may be some educational advantages for institutions to integrate some of the best aspects of distance learning into traditional courses to build a "hybrid" learning environment [9].

Elaine Allen and Jeff Seaman investigated about online education in the United States during year 2007 (before covid-19) and found some evidences through questions about motivations for teaching online was asked a sample of faculty who teach online and academics. There was a wide level of agreement for online education to continue its rapid growth, it must be perceived as important by the chief academic officers who are planning tomorrow's educational offerings. Only if these academic leaders believe that online is critical will they build future programs around it. More evidences by results shown an increase of institutions stating that online education is critical to their long-term strategy [6].

The journalist Inês Santos after a study done said that the Pandemic had a great impact on school performance. With the closure of schools, adaptation to classes at home and notable social inequalities, it is clear the pandemic has affected education in Portugal [11]. Many parents *consider that their children's academic performance has worsened during the period without face-to-face classes"*, reveals a report by the Portuguese Catholic University [6] . The forecasts also point to a *"positive evolution of education"* over the next

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[6] Survey of the Portuguese population from July 13 to 17, 2020.

two years. When it hit Portugal, the Covid-19 pandemic did not just bring about a public health crisis, nor did it only affect the health sector. The confinement decreed in March, the closure of schools and various economic and social activities aggravated some of the problems that already existed in Education and increased the inequalities among students [11].

Sandra Soares, Rodrigo Lobo, Marcelo Sá Carvalho said that compared to the previous school year, 41% of the surveyed parents, selected at random, consider that *"their children's school performance worsened during the period without face-to-face classes"*. About 32% say their children's school performance has not been affected by classes and only 17% think it may even have improved. It should be noted, however, that most parents who affirm that distance learning has worsened students' academic achievement are *"less educated"*, which can be considered an indicator of *"increased inequality"*. With regards to parental support in school activities, 50% of respondents reveal that they supported *"more or much more their children during the distance learning period"*. Also, in this matter, it is mentioned that parents with more schooling followed and supported their children more, during the period of classes at home, than those with less schooling [11].

Asked about the resumption of face-to-face classes or the maintenance of distance classes, almost half of parents with school-age children (48%) agreed with *"a mixed system at the reopening of the school year"*, that is, with *"a solution that allow face-to-face and distance classes"*. However, only 40% of the total respondents (parents with school-age children and the remaining respondents) believe that *"mixed"* education is the solution for the next school year if a similar epidemiological situation persists. This report clarifies that *"defending this solution is not transversal to society"*, but *"particularly defended by more educated people"*. In fact, most parents replied that they would *"put their children in school"*, in a scenario of spreading the virus like the current one if schools reopen already in September 2020. But of this, only 27% answered they would do so for sure, this percentage being slightly lower in the Lisbon region (22%) than in the rest of the country [11]. As for the expectations of the

evolution of Education parents imagine it will be the same or worse. 34% of the total respondents see "Portugal in two years with worse education". This survey reveals that the pandemic has further highlighted social inequalities among students, namely in access to the means to attend classes and school support [11].

At the other hand the World Health Organization (WHO) says that all students must return to schools as soon as possible, also remembers that in many places, the school is the safest place for children and the only one where you can feed properly. All over the world there are millions of children and young people who have been out of school for months because of the pandemic. Without a doubt, young people do not have the same mortality rate (it is lower, says WHO), however, what is becoming clearly apparent is that a large proportion of people who become moderately ill afterwards have long-term problems in terms of fatigue, exercise tolerance, lung function, among other things. They are having difficulty returning to the gym, they are exhausted just up and down stairs, and we are talking about young people. And many are recovering very slowly. Who wants to spend three, six months or a year recovering from an illness that lasted ten days and can be prevented? [14][15]. So, WHO recalls that, in many places, the school is the safest place for children and the only place where they can eat properly, emphasizing that it is essential for the development of children that students be able to return to schools and face-to-face education as soon as possible [14].

Finally, there are some implications of E-learning for students, as researched Kayte O'Neill et al. For instance, they assume that not all students respond well to an E-learning environment, relating to the effects of a change in learning style (presential learning to distance learning) [7]. So, institutions implementing E-learning must be aware that students will react differently to the changing paradigm of learning and rather than implement changes across the board, should aim to offer courses tailored specifically towards the different learning styles. In failing to take such action, universities run the risk of low success rates and at worst, failure. Firstly, Knight proposes that E-learning will benefit students who are used to being 'spoon fed' on the basis that students can no longer be passive about their learning [18]. This view is endorsed by Hawkes and Cambre who claim that in order to gain results, students must take responsibility for their own learning [19]. In contrast to Knight are the propose of Kershaw i.e., students will not automatically become conscientious, self-motivated individuals and that success in fact depends on the level of interaction between students and lecturers that is required to stimulate good results [20]. Also, independent learners have the potential to be successful in distance education, however those lacking in the skills to study independently will not react well in a virtual environment [21].

## V. Conclusion and Forecasting

With the pandemic scenario due to the coronavirus, the interest and necessity forced the teaching to be totally at a distance. However, there is always a resistance to change, due to various segments of students, younger students, children, and adolescents who, due to emotional training needs, as well as family needs, it is not appropriate to be totally at a distance. For this reason and as we have seen in discussion, the most sensible and acceptable attitude is that the teaching model is mixed, that is, part of the teaching is distance learning and the other part of teaching is face-to-face. On the other hand, the blind and indiscriminate generalization of online education should make us reflect with some seriousness on the true nature and the real impact of the attack currently directed at the foundations of the university way of life as we always know it. With the emergence of the coronavirus pandemic, on the one hand, and with the operationalization of political technologies meanwhile mobilized by governments, on the other, the institutional character of the university, as we have known it until now, suffers a profound and a huge setback on a global scale. This is an undeniable reality, but it is also a complex reality, worthy of further reflection. The acceptance of online education is not accepted by everyone, either in a pandemic scenario or without this social restrictive scenario. As we have seen in the analysis and discussion, the most appropriate measures to be adopted to protect public health and at the same time maintain the quality of teaching and acceptance

by all requires the teaching model to be mixed. Some face-to-face classes and other distance classes. Because the public's perception in Portugal and in the whole world is that online education presents worse results in school tasks and in health and well-being.

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