Is Online Education a Setback or Step Forward?

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Abstract

The transition to online learning caused by the Covid-19 pandemic has led to the consolidation of the education and the technology sectors. Over the last two years, teachers and students have been to observe firsthand the short-term benefits and detriments of distanced-online education. Early research suggests that the 2020 transition to online learning was accompanied by significant issues including a decline in student mental health, lack of student self-regulation, and decline in social and emotional competencies. However, these negative effects may have more to do with the stress and disruption of the pandemic than with online learning itself. This article argues that online learning still has positive aspects and immense potential that should not be ignored. To categorize the effects of this new normal for student' education, this study uses four primary lenses: personal, social, educational, and technological. With more careful implementation, training, and the incorporation of new AI technologies, a hybrid model that blends in-person and online education may transform education for the better, making it more personal, inclusive, and affordable.

Keywords: Online Education, Detriments, Advantages, Self-Regulation Skills, Flexibility, Convenience, Cheating, Distanced Learning, Hybrid Education, Chronic Absenteeism

1. Introduction

Because of the lack of flexibility of traditional teaching techniques, our education system was not able to easily weather the changes brought on by the Covid-19 pandemic. Instead, the education sector was forced to radically change as learning shifted online. Online learning allowed some students more flexibility to learn to their best ability and take ownership of their own education, but many parents were not satisfied with the lack of face-to-face learning and the gaps in education that accompanied the rapid transition. Most institutions converted to either in-person or hybrid learning due to pressure from students and parents. Currently, many educators and learners are at a point where they are forced to decide between their safety or a higher-quality education. But if we direct the education sector's future towards online education, where the potential is immeasurable with the correct investments, this trade off doesn't have to be made. An important step that educators must take in order to better analyze the current situation and make a better conclusion is to categorize the problems that they are trying to solve. There aren't many already existing categorizations when it comes to problems and advantages of online education, but this article will aggregate those that do exist and consider what they mean for the potential future of online education (Lozovoy & Zashchitina, 2019). We believe that personal, social, educational, technological literacy denote the four main categories of dilemma facing online education. This article will conclude by attempting to come to the most sensible solution by weighing all of the effects of each dilemma.

2. Benefits

Online education has many benefits in theory, but in practice it has led to a lot of difficulty for students. But while considering a solution to the current problems with education, it is important to thoroughly remember the potential benefits of online learning. Convenience is one of the most prominent benefits of online education, which gives both teachers and students the flexibility to work and learn wherever they please. Online learning also allows for assignments to be graded using automation, provides more accommodations for disabled people, and can lead to instant improvement and change. The following sections will delve deeper into the advantages of online education.

2.1. Convenience

When it comes to traditional learning students have to travel to get to their classes. This might be easy for some students but when it comes to physically disabled people it is more than just traveling to school each day, it is a journey of struggles. Online education accommodates this responsibility by allowing each student to choose where and when they want to learn and adjust the time of spent on learning based on their own skills. This does have a downside as well. Traditional learning shows that keeping a steady routine is one of the most effective strategies for student learning, and this routine can be harder to establish in online learning. So to compensate for this, students might need to set their own routine and not just study before exams and quizzes. The convenience of online learning also comes with the responsibility that students need to be able to find a place of study where they can concentrate and work on their schoolwork. Grading is also one of the most important conveniences for online education. Learning Management Systems (LMS) exits that can automatically grade student assignments and give feedback on what the student needs to do and which topics they need to improve more upon. This is not only a convenience for the student but also the

Kseniya Satsevich

Ibrahim Eren Bisen

Is Online Education a Setback or Step Forward?   Yetkin Yildirim

professor as well. Instead of individually grading each of their students' assignments, professors can spend more time answering their students' questions to help them better understand the class concepts. When creating online education, faculty and institutions do have to spend an extensive amount of time developing the course that they will offer, but afterwards it is the only matter of guiding students through the course modules to make sure they are learning the subject and improving further. With online education, improving the courses can happen in an instant, which in turn is equivalent to better courses for each student.

2.2. Flexibility

It is difficult to argue with the benefits of flexibility that come with online learning, which allows lectures to be viewed on-demand at any time and from any location. Viewing lectures on-demand indicates that there is an opportunity to pause, record, rewind, or play the lecture at double speed at the students' convenience, allowing learners to achieve the complete comprehension of any given material before moving further to the next module. It makes it possible for students to choose their own pace and build learning into their personal schedules. Moreover, students are able to choose from a significant number of programs that exist in the online world, which provide different ways of gaining information and give different levels of flexibility. Some of these programs can provide maximum freedom and independence since they focus on individual learning, while other programs are more like regular classes with a focus on self-learning. In traditional classroom, the workload increases from year to year, which can make students more exhausted. But with online learning, students are given the opportunity to save their time without changing their locations. Students are now completing their degrees from their homes, eliminating the need to waste time and resources commuting. Professors can also work with students from different countries at any time, and online classes can be accessible to students around the world.

2.3. Cost

In order to determine whether online education is beneficial or not, one crucial aspect to consider is the comparative financial cost of online learning. Many researchers have suggested that online learning can reduce the overall cost of education. In comparison to in-person education, institutions were able to save up to 57% of their money on teaching in hybrid courses. Needless to say, universities can save even more when courses are completely online. According to Cowen and Tabarrok, online learning decreases the marginal cost and increases the fixed cost (2014, p. 520). However, the fixed costs that include time to prepare for lectures, recording the lectures, development of new apps, and incorporating animation do not play a significant role in raising expenses. That is why in general, online learning tends to decrease costs for universities. The reason for reduced expenses is the automation of different systems that professors use, such as grading or monitoring, and an unlimited number of students who can join online courses. Dsata indicates that the decreased time students need for learning also cuts costs on the grounds that students do not need to commute every day to their institutions, and Universities do not need to assist as many students as they do now, which reduces the cost of attendance.

2.4. A Personalized Learning Environment

The next point that needs to be mentioned is that online education makes personalized learning possible by creating unique learning conditions for all students regardless of their needs. Personalized learning can be accessed through different online means like e-learning

Kseniya Satsevich

Ibrahim Eren Bisen

Is Online Education a Setback or Step Forward? Yetkin Yildirim

platforms, massive open online courses, or university-developed online programs, and implies non-linear learning with unique paths for every student based on students' needs, preferences, and specific characteristics like age, gender, motivation, pace, level of knowledge, etc. In the environment where a student is the center of the educational process, every aspect of education can be controlled, and learning becomes more personalized, students more motivated. Modern technologies facilitate the integration of personalized learning and are involved in the adaptation of the content, which enables the boost of the efficiency of learning. This is even more true of AI-powered learning programs, which can gather more and more information about the student with every interaction online, then take this information into consideration while developing future exercises for that person. It plays a significant role since it provides students not only with unique learning conditions but also encourages student ownership of knowledge, promotes creativity, fosters critical thinking, and increases students' responsibility and accountability (Halim, Ali & Yahaya, 2010, p. 3).

3. Detriments

It might initially seem like online education may have more detriments than benefits, but that is not entirely correct. One of the reasons why it might seem like that at first is because most research and discussion focuses on the negative effects. That is why it is important to come to a sensible solution not just by looking at the pros and cons of online education but also weighing in the effects of each of the pros and cons on students, teachers, guardians, and institutions.

3.1 Self-Regulation Skills

One conclusion that can be drawn from the experience that institutions and faculty gained in recent times is that students typically lack the self-regulation skills needed to effectively manage online learning (Carter Jr. et al., 2020). Traditional education promotes a number of relevant skills which might not be prioritized in online learning, such as time management, personal motivation, attention, and communication skills. Although students have more independence in online education, this independence comes at the cost of the formal structure and routine that students are most familiar with. This is downside of one of online learning's main advantages: flexibility. The lack of a regular schedule creates more trouble for students whose self-discipline has not reached the level required to study online. Students are more prone to fall behind when there are fewer time restrictions owing to the fact that it is hard to balance personal life and online education. A great number of factors such as distractions, multitasking, and inappropriate workspace lead to students' reluctance to manage their time properly. The reduction of interest in studying is followed by the lack of motivation which can become a determinant in achieving high results. The lack of motivation is evoked by external and internal factors and concerns ranging from unclear course outcomes to feelings of anxiety and isolation. The internal factors include satisfaction with course content, need for communication, and self-regulation, while organizational problems, situational problems, participants of the learning process influence students' motivation in general. All these components put additional pressure on students and hold them back from successful studying.

Another significant detriment in self-regulation skills is an issue with focusing on the study materials for long periods of time. Online learning takes place on the same computer screen as entertainment and students' social lives, making them more likely to get distracted by their

surroundings or the opportunity of checking social media. Since students won't be face-to-face with a teacher in a classroom, they need to be able to work and learn on their own with support from teachers. These skills will be necessary when students are trying to use online resources to aid them with their learning, and when students work on classwork or homework assigned by their online instructor. These skills, however, are not that easy to acquire and demonstrate. This is because many students can have problems with pacing and procrastination when they are on their own. Although this complication can exist in face-to-face learning too, in an online learning environment, it is much more apparent and can have more serious consequences. Pacing and procrastination is a big problem for students during this time. Because of our current circumstances with COVID-19, many students can spend their days online for very long periods of time. This can cause students' days to blend in together and make it easier for them to lose track of time which can lead to them not completing their work when they are supposed to. Teachers and institutions need to support those students who are having trouble with pacing and procrastination.

3.2 Information Dump

Online learning is spreading around the world, making education accessible to an ever-growing number of students. However, people can easily get overwhelmed by the quantity of information online and lose track of the usefulness of the data they read. In the digital environment, the process of learning becomes more complicated as a result of the amount of additional information available and the lack of guidance from mentors. Proponents of online learning allege that more information is pivotal and can be the compensation for not having sufficient traditional interactions with teachers. On the whole, professors assume that uploading additional materials and resources for students is beneficial, and they assume that they can fill knowledge gaps and provide more options for delivering information. But the negative impact of this information overload rapidly emerges when students do not receive feedback on what they have just learned and have no one to discuss new material with. For many students, the process of adjusting to the of information available online can be overwhelming, since they realize that they are responsible for figuring out all the confusion they encounter while studying in the vastness of the online learning platforms.

3.4 Cheating

As online courses have become more necessary for higher institutions, there has also been an exponential rise in the rates of cheating, which creates more challenges for professors and prevents students from becoming professional workers in their realms. The introduction of online education gave students more freedom and independence, but for some it has meant less supervision and more opportunity for deception. Sixty-six percent of online students in a survey reported that they were violating university policies while cheating: using prohibited resources, breaking the exam rules, and doing their assignments in an inappropriate way (Raines et al., 2011). There are two reasons that can explain this. First of all, more than one-third of students firmly believe that academic dishonesty can lead them to achieve success and get higher grades with fewer efforts. Secondly, according to students' opinions, the great advantage is that it is easier to implement cheating in online courses since it is harder for professors to detect whether their books and notes are open. Unfortunately, not everyone realizes the significance of a conscientious attitude to education, which becomes a tool for a bright future with all the skills and knowledge that students need to gain in higher education.

Moreover, online education makes things even easier and worse for those who are less motivated.

3.5 Technological Accessibility

Additionally, as was clearly seen throughout 2020, many discrepancies still exist in the access to technology that students have all around the world. Some students might have poor internet connections and low-quality devices that cause them to take longer to do work. In addition, some of these students may not be as familiar with the online interfaces and applications used in their online learning environment. Consequently, they will have to learn to use these interfaces and applications before they can use them to learn. The students who are under these circumstances are generally students who come from lower socioeconomic classes. Teachers should communicate with their students to see who might have these types of problems with their technology. Then institutions need to support those students who have these issues and try to make sure that those students have adequate devices to effectively participate in online learning. On top of that, arguably the biggest factor that makes it harder for students to pace themselves, especially during COVID-19, is the lack of motivation. This lack of motivation could also be caused by the quality of the devices that a student uses, which adds to why teachers should address this problem. Moreover, students that aren't motivated to do their work, regardless of other factors, tend to procrastinate their work.

3.6 Chronic Absenteeism

Studies indicate that students lost at least one-third of their expected academic progression due to the pandemic in early 2020. However, we should be careful when extrapolating this regression in learning to the 2020-2021 school year. COVID-19 came as a surprise over the spring of 2020, and emergency remote learning was hastily instituted. Schools and teachers had much more time to plan and prepare for the next school year, so decreased learning time should be less prevalent, and its effect on education less imposing (Balfanz R., 2016). Nevertheless, teachers still need to watch out and make sure that students do not lose learning time to prevent loss in academic performance. Chronic absenteeism can also be a factor that leads to loss in academic progress. Consequently, teachers need to be careful against chronic absenteeism as well and do their best to prevent it. Especially after 2020, teachers should observe their students to watch for chronic absenteeism and talk to the parents of the students who are constantly absent or find another way to prevent these students' absenteeism.

3.7 Faculty Perspective

It must also be considered that, during this school year, a large number of teachers were pressured to leave schools because of problems caused by the pandemic, so strategies must be put in place to retain these teachers. This itself could create many personal problems, but because of the academic loss and to compensate for the lack of self-motivation among students, online education faculty has spent hours increasing the quality and the quantity of their lectures to be able to accommodate all of their students.

It may not be immediately evident, but faculty also needs help through this transitional time. Weak support systems have failed to coherently help teachers adapt to an online environment and left them unequipped to teach over the pandemic. While just over two-thirds of public-school teachers have received instruction on adapting to a virtual environment (which is still

concerningly low), many of these teachers found the help to be only somewhat useful, and in some cases, not useful at all. Most teachers had never contemplated online learning before the pandemic, let alone attempted it. Even the technically proficient teachers who did manage to familiarize themselves with online LMSs had little experience designing an online curriculum or managing an online class. They were left to come up with teaching plans and curriculum on the fly, possibly damaging the quality of education. Teachers also have to deal with the difficulty of creating emotional bonds virtually. Emotional bonds are critical to learning, but the online environment makes it especially hard for the teachers to form meaningful relationships with their students. However, over the past year many teachers have now experienced what it is like to teach online. From now on, it should be easier for teachers to teach online and to keep the quality of their education as high as they possibly can. The detriments for teachers were countless, but due to the perseverance of many teachers, they were able to adapt to their situation. Nonetheless, faculty still needs a tremendous amount of support from institutions going forward.

4. Nine Dimensions

ONLINE EDUCATION MODFYING VARIABLES

MODALITY
- Fully online
- Blended: > 50% online
- Blended: < 50% online
- Web-enabled F2F

STUDENT - TEACHER %
- < 35 TO 1
- 36 - 99 TO 1
- 100-999 TO 1
- >1,000 TO 1

PEDAGOGY
- Expository
- Practice
- Exploratory
- Collaborative

COMMUNICATION
- Asynchronous online
- Synchronous online
- Blend of both

FEEDBACK
- Teacher
- Peers
- Teacher & peers
- Automated

PACE
- Self-paced [open entry | exit]
- Class paced by teacher
- Class paced by teacher with self-pacing options

ROLE OF THE INSTRUCTOR
- Active instruction online
- Small presence online
- Recorded presence online
- No presence online

ROLE OF THE ASSESMENT
- Determines if student is ready for new content
- Informs system of how to support student (adaptive instruction)
- Input for a grade
- Identify students at risk of failure

ROLE OF THE STUDENT
- Read, listen, or watch
- Solve problems | answer questions
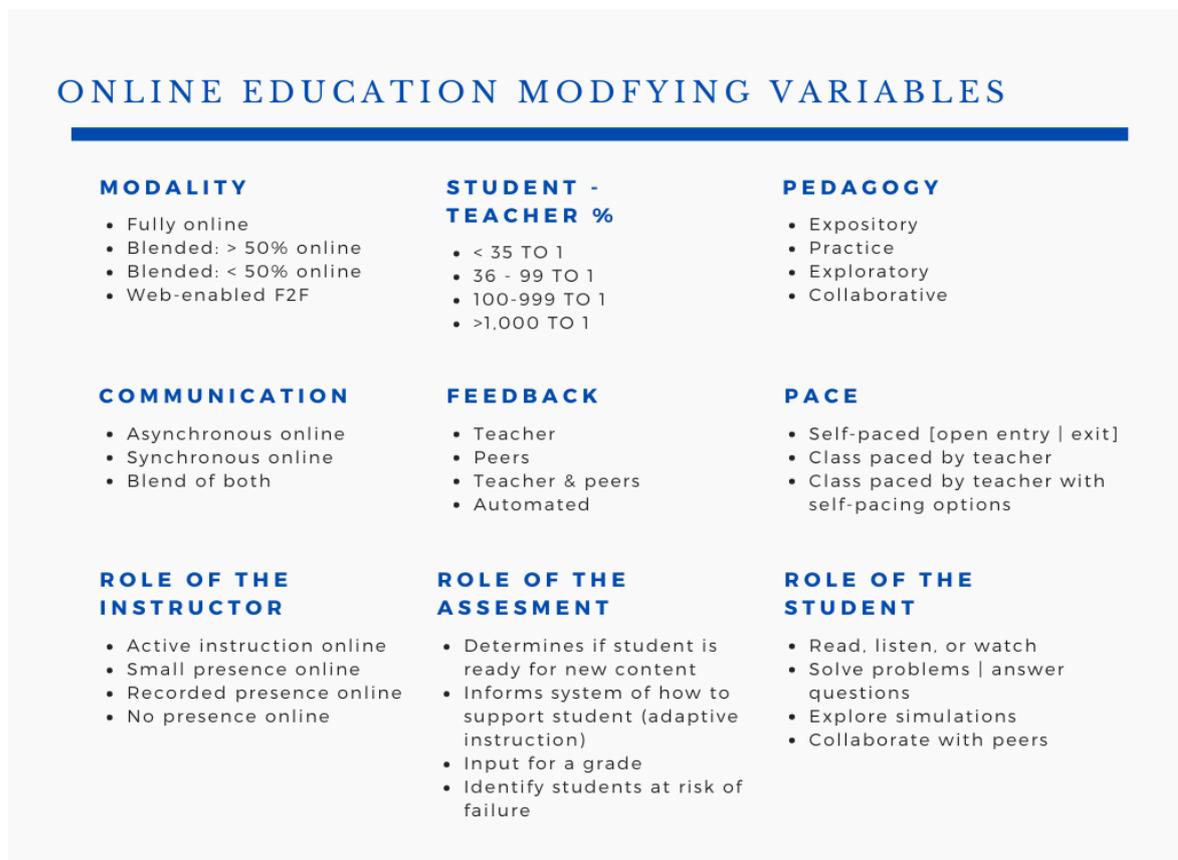- Explore simulations
- Collaborate with peers

Figure 1. 9 Dimensions of Online Education Modifying Variables (Means, Barbara, 2014)

The nine modifying variables of online education are a good place to start for faculty members and institutions designing courses online. Schools and universities can provide

teachers with the resources to modify their classroom environments so that they are the best they can be. Within each of these dimensions, there are different variables; however, not all of these options work together well to create an effective online learning environment, which teachers also must consider. Every situation can require different options to be more effective. For example, in a class of adults, it is generally more beneficial for the teacher to make the class asynchronous, whereas in a classroom of younger people, having synchronous classes can be more beneficial. Another thing that teachers should keep in mind is that choosing some options can change the effectiveness of other options. The student-instructor ratio, for example, can change many other factors in an online classroom. As the number of students in a class rises, it can be harder for a teacher to implement certain options in their class. For instance, the teacher of a large classroom might have to resort to using an automated source of feedback because it is harder for them to give feedback to all of their students one by one. Therefore, to create an effective online learning environment, especially in these times, teachers need to choose the proper options for every class based on several factors like the age of the students. Choosing the proper options for every online classroom setting can greatly increase and decrease the effectiveness, easiness and functionality, but if made the correct choices it could bring online education to the point of effectiveness of face-to-face learning.

5. Conclusion

The role of online learning in the domain of education is significant, and its importance will only continue to grow due to the demand for modern technologies and the need for accessible education, making access to education a right, not a commodity. With the development of artificial intelligence in the years ahead, online learning will become an integral part of everyone's learning schedules, thus removing boundaries, adding inclusivity, and bringing more independence, safety, and convenience. However, online education is not a replacement but rather a tool that is able to offer learners additional help and support. The most reasonable solution that can help fulfill all students' demands— which are changing according to their physical and mental abilities, financial situation, and geographical location— is a combination of in-person and online styles working together in the hybrid education, where some students can study in class and some remotely at the same time. The value of hybrid courses is that they can combine all benefits from online and traditional education and reduce the negative effects, making courses more accessible to students. To make this work, universities should introduce hybrid courses worldwide. Although 70% of students prefer face-to-face interactions, half of them reported that their ideal system is the combination of aspects of both in-person and online education (Koenig, 2019). There are still 30% of students who enjoy online education more and 35% of students who would like to have blended courses, which indicates that choosing only one variant is not an option. Hybrid education will give students an opportunity to choose from online or traditional courses, while all of them can still benefit from automated platforms that facilitate the process, such as grading, feedback, and online homework. It is reasonable for universities to continue working with online platforms maintaining the traditional approach since they benefit students' learning process and reduce faculty and professors' efforts.

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