

# Online Academic Education: What to Keep and What to Drop?

Edited by  
Alkeline van Lenning  
Herman de Regt



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## Dedication

The editors of the book wish to thank all authors for their contribution to this edition of the Tilburg Series in Academic Education and for their willingness to contribute to the discussion on the dos and don'ts of online education. A special thanks goes to Annemeike Tan for providing professional support and for conducting the interviews with students.

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## Foreword

What do we want to keep and what rather not? This is the important question posed to us in the title of this fine new publication in the Tilburg Series in Academic Education! This approach reminds me of the question I asked many people in the places where I was working at the beginning of the pandemic: please make a list of the things you really wouldn't want to lose after this terrible pandemic ends. This question may be a little surprising, given the havoc wreaked by coronavirus, but it is a fundamental one nevertheless.

True, the virus has spread like a mutating monster, completely disrupting our lives. But all that dreadful disruption simultaneously contained the beginnings of new possibilities, some of which were already in the air. Monsters expose and reveal, and also open up new opportunities. "Le vieux monde se meurt, le nouveau monde tarde à apparaître et dans ce clair-obscur surgissent les monstres"<sup>1</sup>, wrote Antonio Gramsci, in his *Cahiers de prison* (1983).

My question originated in precisely this feeling: that we can learn from every crisis, especially because of all the things that we pulled off after all. Our university staff and our students deserve a great compliment for their resilience and their phenomenal efforts to implement and adopt digitalization. The texts in this publication are appropriately subdivided into three parts: Risks, Opportunities, and Best Practices. This is in line with the intensive discussions within our academic community about how and under what conditions the use of digitization – what a steep learning curve it was! – can contribute to further improving the quality of education for our students. We talk about hybrid working and blended learning: they are both inspiring and somewhat unsettled concepts. Blending can easily become blurring, and digitalization both presents a promise and poses a realistic threat to personal interaction and the human touch. Education benefits from building real relationships between lecturers and students. Fortunately, there are many examples of how forms of digitization can also contribute to this.

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<sup>1</sup> Die Zeiten, in den das Alte noch nicht sterben kann und das Neue noch nicht werden kann, sind die Zeiten der Monster"  
 Antoni Gramsci (quoted in Guérot, 2016)

Therefore, when formulating questions and searching for answers at Tilburg University, we always choose a two-pronged approach: be cautious and be curious. Cautious because the importance of the quality of education is leading, as is Tilburg University's educational vision, based on personal and academic training and interaction. And curious about the wonderful opportunities offered by digitalization: learn and innovate and, if necessary, color outside the lines for a change.

The discussions and questions will continue to be highly topical in years to come. Indeed, I expect that, given their strategic importance for higher education and research, both at home and abroad, they will be at the center of many dialogues we will have about the future of our university as well. This publication contributes to the quality of those dialogues. I am grateful to the editors and the authors for their contributions, which I welcome as an invitation and a call to further continue the consultations on this subject with some priority.

**Wim van de Donk**

*Rector Magnificus and Executive Board President of Tilburg University*

# Introduction

# Introduction

**Alkeline van Lenning**

When the coronavirus first surfaced in Wuhan in December 2019, no one could have foreseen the consequences that it would have for our personal existence. Indeed, even as the pandemic rapidly spread, and the first case was detected in the Netherlands in February 2020, no one truly thought that it would impact as deeply and as long as it has upon our private and work lives.

When the Dutch government announced the first lockdown in March 2020, it had profound consequences for higher education: for students and lecturers, for administrators, and for those working in the support services. Researchers ended up sitting at home alone, administrators feverishly discussed which course to follow, teachers were asked to transform their courses practically overnight into online modules, while students were confined to either their student rooms or parental homes.

This issue of *The Tilburg Series in Academic Education* examines the consequences of the COVID-19 pandemic for education within our university. Of course, the most notable consequence was that we switched *en masse* from on-campus teaching to online forms of education. Hence, this issue is focused on addressing the following questions: What are the opportunities and risks posed by online education? What practices would instructors like to share with their colleagues? How have students experienced these forms of education? What lessons can we learn from this period? To this end, we asked instructors, students, and educational policymakers to share their experiences with and ideas about online education. Their answers to our questions are collected and presented in this volume. Although we divided the contributions into three parts: “Risks”, “Opportunities”, and “Best Practices”, it is important to note that the essays are categorized based on the author’s main point of concern. Woven in between these essays are students’ experiences of this disruptive period as well as their opinions on the new modes of teaching, which are presented in text boxes. These texts are the result of interviews with five students from Tilburg University that were conducted by Annemeike Tan for the purpose of this special issue.

## I. Risks

The values of good quality and accessibility of academic teaching inform Edith Hooge's search for an answer to the question: "How should academic teaching and learning be shaped in the future in view of advancing digitalization?" According to Hooge, good quality education mainly consists of two elements. The first pertains to the social dimension, that is, the importance of interrelationships and social interactions for students' learning. The severe consequences of the pandemic on the social function of education demonstrate that providing academic education in its physical form is vital for maintaining the quality of this social dimension. The second quality refers to the intertwining of research and teaching, that is, the continuous cross-fertilization between education and research.

Hooge states that digitalization provides opportunities that have the potential to enhance the quality of education, such as, for example, digital storage and archiving, new ways to transfer knowledge and support learning, and detailed course management systems. However, she also raises some potential disadvantages, including, among other things, the increased time and effort demanded from faculty members, investments in technical and educational knowledge and skills, and privacy and ethical issues.

The second fundamental value in Hooge's quest for an answer is accessibility, which refers to ensuring access to high-quality academic education with a sufficient level of educational resources and facilities. Because of ever-growing student numbers, the argument that online academic education is more efficient might win out over the qualitative argument that face-to-face education is better from a social perspective. The author warns that if online teaching becomes the norm and face-to-face education turns into a specialty, then this poses a threat to the accessibility of good quality academic education.

Colette Cuijpers starts her paper by positing that online tools not only offer a solution to continuing to be able to provide education during a global pandemic, but also provide opportunities to introduce innovation within traditional forms of education. However, transition also creates a series of risks and challenges. High-quality online education depends on a few technical preconditions, including a sufficient infrastructure and both soft- and hardware requirements. Cuijpers raises an important question related to these requirements: "If access becomes dependent on the existence and quality of digital infrastructures and the economic situation of students, what does this mean from the perspective of the right to equality and non-discrimination?"

She also raises another challenge related to privacy issues, since online education is heavily dependent on video technology that is deployed within the privacy of students' homes. Especially in the case of doing exams remotely, forms of video control are mandated by universities to prevent fraud, largely in an attempt to preserve the validity and value of a diploma. Although universities may have valid reasons to resort to surveillance software such as online proctoring in their efforts to prevent fraud, Cuijpers argues that this must

not disproportionately impinge upon students' fundamental human rights. Indeed, she concludes that the rights and obligations of both students and universities are affected by online education, thus creating a clear need to strike a proper balance between the sometimes competing interests.

Jody Oostema sets out to investigate how the sudden shift to online education has impacted upon students' mental health. There is an extensive body of research showing that mental health was already a serious issue for students long before the pandemic, with depression, anxiety, and high levels of stress being common. In relation to this, Oostema notes that academic study is often accompanied by a high workload, pressure to succeed, and worries about the future, which, in turn, makes it a leading stressor in the lives of students. Hence, mental health issues can detrimentally impact upon students' academic performance, which, in turn, increase their symptoms of anxiety and depression. In this way, students are at risk of experiencing a vicious cycle of distress.

Research during the COVID-19 pandemic has demonstrated that the lack of social interaction and the shift to online education has exacerbated this cycle of stress and mental health issues. Oostema conducted a survey among 40 students from University College Tilburg. Her findings show that most of the respondents experienced at least eight out of the twelve symptoms of stress, anxiety, and depression, with the vast majority indicating that the COVID-19 pandemic has negatively impacted upon their mental health. The interviews with students suggest that they experienced mental health issues as a result of both the switch to online education and due to being confined to their homes, which profoundly affected both their educational and social lives. The students underscored various negative consequences of online education during the pandemic, including, among other things, lack of concentration, reduced productivity, and motivational issues. They also experienced difficulties in fulfilling their daily obligations due to isolation, a lack of structure, procrastination, and a sense of tiredness.

However, given that online education also has many benefits, Oostema argues that it would be a shame to throw the baby out with the bathwater due to some of the deleterious effects of the pandemic. She concludes that the main reason why online education exacerbated mental health issues among those students she studied was due to the other limitations placed upon social contact and outdoor activities by the pandemic and the attendant lockdown measures.

## II. Opportunities

Tessa Leesen also writes about students' well-being during the pandemic. She interviewed students about their learning experiences and underscores that it was harder for students to connect with their peers and lecturers as a result of the restrictions, which, in turn, often left them feeling isolated.



Leesen's essay investigates the impact of the governmental measures upon students and, more specifically, on study success. In doing so, the author draws a clear distinction between external and internal study success. External study success is assessed according to external and outcome-focused standards, such as grades, nominal study pace and study completion rates. Since an adequate study pace and a focus on educational attainment are valuable for all stakeholders in higher education, the author explores whether students have performed worse under the educational restrictions, or whether their performances remained the same or perhaps even improved during this period.

This contribution does not only raise awareness over the risks, however; rather, it also aspires to offer a solution to this problem. Leesen's core message is clear: there is more to study success than merely grades and study progress. Consequently, we must also examine the impact of the governmental measures on internal study success. This type of study success is measured by internal standards, such as finding enjoyment in academic pursuits, displaying intrinsic motivation and effort, and forming relationships. This contribution offers a multidimensional and multilayered perspective on study success during the COVID-19 pandemic.

In their contribution, Jeroen Kuilman and Aswin van Oijen briefly address the need to think deeply about what is required for a university to facilitate innovation in academic education, especially when an institution like a university is dealing with disruptive new technologies like online academic teaching—a highly welcome new technology in a crisis such as the COVID-19 pandemic.

Kuilman and Van Oijen discuss a relatively new way to stimulate and channel innovations in organizations, such as, for example, the 'open innovation funnel' put forward by Chesbrough. Like other organizations that are heavily dependent on innovation, a university such as Tilburg University has much to gain by using the open innovation funnel as a tool to think about innovation. The reason for this is that innovation can originate from inside the organization, but also from outside the organization. The permeable boundaries of Chesbrough's funnel are essential in this regard: Tilburg University may discover new educational innovations, but it might just as well incorporate or adopt innovations developed by outside parties.

To be able to maximize the opportunities for innovation, the COVID-19 crisis has demonstrated that an organization must have a center of innovation, such as EDUiLAB, which focuses on the open innovation funnel. The organization needs to constantly generate and seek out innovations, despite limited resources, ingrained processes, and solidified values. It also shows that such a center of innovation would likely have the capacity to quickly support and intervene in a critical situation, whether it pertains to an unexpected growth in student numbers, disruptive new technologies, or indeed a global public health pandemic.

In February 2020, Sander Bax, Petra Heck, and Amy Hsiao took part in a meeting of the

Faculty Council of Tilburg School of Humanities and Digital Sciences (TSHD) where the *Well-Considered Digitalization* plan was discussed, which included the intention to innovate by incorporating increasingly more elements of online learning into their educational programs. However, this was the same month that the COVID-19 pandemic hit the Netherlands, which led to an unexpectedly accelerated shift towards online education. Although the rapid nature of the shift to online education constituted a real crisis at first, it also offered new possibilities with respect to online academic education. In their essay, they shed light on some of these opportunities, concluding that rather than implementing a full-blown digitalization of the academic curricula, we instead need to introduce a smart hybrid form of 'blended learning' in our University programs. Importantly, both teachers and students appear to be supportive of this approach.

In the spring of 2021, a working group presented the Educational Board with a report on blended education, which articulated how this innovation represents the means through which to establish an innovative educational culture at Tilburg University by combining the best of both worlds: online *and* offline. This is in line with the TSHD Educational Innovation Plan, which also focuses on the development of blended learning to drive innovation, aims to further implement the Tilburg Educational Profile (TEP) in TSHD programs, and stimulate small-scale educational experimentation. The Tilburg Center of the Learning Sciences, established by TSHD in the fall of 2020, will play an integral role in terms of fulfilling this ambition by unifying campus-wide research projects that monitor and analyze the results of ongoing educational innovations. In 2021-2022, a faculty-wide Educational Innovation Project will examine, also based on insights gained during the COVID-19 pandemic, how blended learning can be effectively implemented in the courses of TSHD. The research-based aspect of the project intends to expand educational knowledge, while the practical aspect aims to outline what adjustments are needed on the courses if blended education is to become a reality.

Kenny Meesters poses the question of how to preserve and implement the educational innovations that emerged in the wake of the COVID-19 pandemic. Meesters answers this question by exploring the three stages that emerge in the wake of crises. The initial response stage takes place right after a disruptive event; during such moments, change becomes an absolute necessity, which, in turn, leads to open mindsets and invention. Although this stage is also characterized by unforeseen challenges that demand flexibility and support, the shared goals and the need for swift action enable large-scale changes to be enacted.

Second, the relief stage is characterized by adaptation to the new situation, but also by emergent conflicts of interest. Within education, discussions and debates arose concerning in-person versus remote teaching. People realized that changes would remain necessary in the long-term, which led to challenges related to educational quality, well-being, and the preservation of the academic community.

Finally, the recovery stage represents the post-crisis world in which changes have become integrated into the new normal situation. This period is characterized by understanding

and acceptance, which means that there is real potential to structurally implement the effective innovations. However, resources and efforts are needed to prevent a return to the old conventional practices. In education, this is always particularly tempting because of the restricted time and resources.

In accordance with the Tilburg Education Profile, the three stages demonstrate that the pandemic has not only led to new ways of delivering education, but also to a renewed perspective on the content and topics covered in our courses. Moreover, Tilburg University has shown itself to be resilient. Most importantly, the University has displayed a transformative capacity to be able to learn and effectively move forward. The author concludes the essay by underscoring the importance that the University strengthens its ability to adapt to new disruptive situations and carry this quality forward into the future.

### III. Best Practices

Aukje Leufkens and Jocelyn Manderveld write about EDUiLAB, which since 2018 has been the Centre for Educational Innovation at Tilburg University. The institution's mission is "to help teachers to develop, implement and evaluate novel teaching methods, finally leading to effective, cutting-edge learning experiences". The shift to online and hybrid education during the pandemic has provided EDUiLAB with the opportunity to experiment with and implement innovative practices. Leufkens and Manderveld evaluate their experiences of this endeavor as well as exploring the conditions that are necessary to sustain educational innovation.

According to the authors, one of the core values for achieving educational innovation is to organize a mixture of top-down (starting from educational programs) and bottom-up (starting from teachers) educational innovation activities. This was reflected in EDUiLAB's 'Innovate Your Education' initiative, which enabled teachers to receive a grant to innovate their education. Furthermore, EDUiLAB established a support line to help with setting up hybrid and blended teaching, in recognition of the fact that the extra time and effort needed to implement new technology in education undoubtedly places a burden on academic staff.

However, knowledge sharing and community building are, at least according to Leufkens and Manderveld, still perhaps the most important values in educational innovation for ensuring that lecturers are well-informed. EDUiLAB connects the schools and organizes activities for teachers to establish communities, which, in turn, facilitates the exchange of knowledge about and experiences with educational innovation.

Throughout their essay, Leufkens and Manderveld emphasize that the pandemic has been a great driver of educational innovation, and they call upon all of us to profit from the current momentum in this area.

Learning the biblical languages Hebrew, Greek, and Latin is an inherent feature of the

Bachelor's program in Theology at Tilburg University. In other words, students must be able to read and interpret historical texts. Therefore, the Tilburg School of Theology has developed the *Biblical Hebrew Online* (BHO) program: an online asynchronous method of teaching languages. Dries De Crom, Piet van Midden, and Arnold Smeets argue that the pandemic highlighted the merits of this program. Their essay aims to both evaluate the development of the BHO program and show how it inspired and strengthened the shift to online language teaching in the regular Bachelor's program in Theology.

The BHO program includes pre-recorded videos with explanations of Hebrew, which enables students to learn Hebrew online and teachers to devote their lectures to diving deeper into the materials. The improved grades of students proved that this approach was successful. Because reading written texts aloud is crucial for interpreting biblical Hebrew, the course leaders adopted a new approach to learning the language via reading. On Canvas, students submit the read texts in an audio format, which, in turn, are then discussed with a teacher online. Later, the hybrid content was transformed into a fully online course. To ensure that students' skills do not diminish upon completion of the course, a series of freely accessible explanation videos, called the *Ephemerides*, were also created.

When the COVID-19 pandemic hit, although it was impossible to simply replace the regular Bachelor's program with the BHO program, the previous experience made the shift to online education much easier and more palatable. Courses were redesigned to include more asynchronous teaching, to offer more in-class time to address questions, and to give students greater autonomy over their own learning. The authors state that in this way, there is more time for differentiation in the Theology language courses.

Because of the 'blended' course format, there is more in-class time to develop reading comprehension skills. Indeed, the evaluation reports clearly testify to the fact that students appreciate this method. Undoubtedly, it is challenging to maintain a healthy group dynamic given the increased differentiation between students, while also monitoring teachers' workloads given the high amount of individual feedback required. However, group discussions and online quizzes with automated feedback can help to address these problems. The authors conclude that "digitalization has not made physical language education redundant, but it has made it much more accessible".

Hans van Dijk and Stefan Cloudt are teachers on the Organizational Dynamics course, which forms part of the Master in Organization Studies at the Tilburg School of Social and Behavioral Sciences. They explain how they coped with the shift to online education. Their course is characterized by an experiential learning method in which the experiences gained by students from participation in workshops is of paramount importance. At the beginning of each class, *serious games* are played to familiarize students with both the reality of a specific situation and the consequences of certain decisions and behaviors. This is then followed by a theoretical reflection, which aims to stimulate an understanding of the organizational dynamics at play within the game. This method has proven to benefit the

absorption of theoretical knowledge. However, the physical nature of the games made the change to online education necessitated by COVID-19 particularly difficult.

Rather than wholly abandoning the experiential focus of the course, the authors instead decided to embrace the digital platform *Gather* as a means through which to find new ways of maintaining the core principles of the course, despite the restrictions of the COVID-19 measures. In *Gather*, people can create an avatar, move it around on various 2D maps, and have a video call with people that come close to them. Not only was it possible to adjust and tailor the layout of the map to fit the different sessions and topics, but it was also intuitive to use, thus making it an effective tool to replace the real-life serious games.

In their essay, the authors look back upon the successful online serious games workshops, half of which used *Gather*. Student feedback was positive, thus indicating that it was a fun and unique learning experience. The authors add that the workshops in *Gather* were a good representation of the original workshops with similar—although less intense—behaviors, interactions, and dynamics.

The authors advocate for the use of *Gather* in decentralized, experiential learning exercises to imitate physical interactions. However, they also recommend teachers to organize a compulsory '*Gather* discovery session' that covers the basics of how to use it, to ensure that the designs and features simulate the desired scenarios to avoid mismatches, and to be clear about undesirable distractions to students. They also recommend combining the use of *Gather* for games with *Zoom* for reflection sessions, so that the pros and cons of both platforms offset each other.

This anthology of experiences and visions of students, teachers and policymakers shows how Tilburg University has dealt with and thought about education during the COVID-19 pandemic. Both the opportunities and dangers associated with online education were discussed, while best practices were shown. Although some authors are considerably more optimistic than others regarding the digitalization of higher education, all the contributions express a deep concern for students and a profound devotion to education.

# I. Risks

# The Promise of Online Academic Teaching: a Sobering Perspective

Edith Hooge

## Introduction

Over the past decade, universities have tried to keep pace with the ever-accelerating developments and opportunities associated with providing academic education in digital form. In response to the digitizing society, academia has sought to delineate a clear vision of the relationship between education and ICT and the right content, form and role of online teaching and learning. Of course, this project gained tremendous momentum in 2020, as the COVID-19-related lockdown forced universities to immediately switch to online teaching. Roughly a year and a half later, these measures have gradually been eased somewhat in the Netherlands. Academic education can once again at least partially be delivered in physical form, which means that academic staff and students are beginning to reengage in the social aspect of academic life in person, rather than exclusively behind a screen.

Although lockdowns may be far from over, universities have nevertheless reopened their doors for a restricted form of on campus teaching, and one wonders what the consequences of such a prolonged period of exclusively online education will be. What impact will the technical developments that were initiated in universities to make online education successful continue to have? What about the new knowledge and skills that were acquired, not to mention the adjustments that were made to the academic working and teaching environment? Notwithstanding the importance of these questions that derive from the ongoing COVID-19 crisis, there is a more fundamental question that must be addressed: how should academic teaching and learning be shaped in the future in light of ever-advancing digitization? That is to say, does the enforced shift to online education signal a profound shift as well as providing time to rethink how academic education might be delivered? Will universities continue with primarily online education, or will they return *en masse* to the old tradition of physical

lecture halls? Will combinations of online and physical educational forms, commonly referred to as blended learning, lead the way and predominate in the future? Or will face-to-face education in person and online education increasingly become integrated to the point that the boundaries between them start to blur?

Before delving into these questions, it is important to emphasize that the digitization of academic education can never be an end in itself. Although it may provide new techniques, tools, and methods for teaching and learning, it simply can never replace the essential elements of good quality education, such as the right curriculum, an effective didactic approach, substantive feedback, or appropriate assessment. Nor should the digitization of academic education be considered as a completely autonomous development that occurs automatically without the active involvement of academic staff, students and university administrators. Ultimately, people, at least to some extent, have the ability to use it in an informed way and decide what and what not to use and deploy in their teaching. In other words, choices can be made: universities can strategize and chart a direction for the digitization of academic education.

Considering both the opportunities and risks associated with online teaching and learning, not to mention for whom or for what purpose it should be used, is critical in determining such a strategy for the digitization of academic education. The weighing up and balancing of these various opportunities and risks must be grounded in the values that underlie academic education. This chapter provides the impetus for such an exercise. The manifold opportunities and risks of online academic teaching will be analyzed in relation to the two most important values of academic education: good quality and accessibility.

## Good Quality

What are the pros and cons of online academic teaching with respect to ensuring the quality of academic education? The quality of academic teaching and learning is a multifaceted and multidimensional concept (Harvey, 2021), as evidenced by the many definitions that have been developed to identify the specific aspects of quality in higher education and the variety of processes, social interactions and actors involved.

The first important element of good quality education is the social element, for the simple reason that education is a thoroughly social affair (Cohen, 2011; Dewey, 1944 [1916]). This is also the case with university education, where the guidance and formation of students continually takes place through both the intended and unintended consequences of the interrelationships and social interactions in and around campus. The social quality of the university community is reflected in the “social spirit” that is—or at least should be—in the DNA of the entire university organization (Dewey, 1944/1916, p. 359).

Second, the intertwining of research and teaching is a recurring theme in many conceptu-

alizations of good quality academic education) Blanco-Ramirez & Berger, 2014; Teichler, 2011), and, in fact, is a central tenet of the Dutch university system. The idea of intertwining research and teaching is grounded in the Humboldtian idea of a unity between research and teaching, emphasizing *Bildung* and free, critical, research and thinking. Here, the university is viewed as a joint enterprise of knowledge acquisition by teachers and students and continuous cross-fertilization between education and research. The role of faculty and staff is to ensure that the teaching materials are based on state-of-the-art scientific knowledge and research. They create a research-rich environment for students, so that they learn to do research and gain a better understanding of the fundamental concepts in their field.

Both online academic instruction and the use of technology offer numerous opportunities to firmly shape good quality academic education. For example, digital storage and archiving provide students with greater access than ever before to scholarly literature and research data, alongside providing ample opportunities online for conducting experiments, engineering, and design. Blended and hybrid education offer new ways to transfer knowledge, to support the learning of complex skills or to guide students in a way that is independent of both time and place. Artificial Intelligence (AI) also provides new opportunities in terms of expanding the scope of activities that support study materials and learning resources. Lectures, lessons, and textbooks can be enriched with visualization, animation, and simulation. Moreover, AI allows students to, among other things, gain experience with sophisticated instrumentation in laboratory work through a 3D virtual learning environment, to analyze a sample of an experiment in a virtual way or learning a language through serious online gaming. Data and learning or course management systems also provide teaching staff with detailed insight into their students’ progress and development, both individually or as a group. They can subsequently use this information in their academic teaching, student supervision, and assessment and examination, to tailor their instruction and guidance, for an adaptive learning pathway, or in the use of digital formative assessment tools.

While the above exploration paints a promising picture of the opportunities presented by online and hybrid education to produce good quality academic education, there are also important reasons as to why we must temper expectations. First, adopting blended or hybrid teaching and learning requires an extraordinary commitment on the part of faculty members, both in terms of time and effort. It requires careful curriculum structure, well-designed (subject) didactics and a well-considered use of technology. A variety of combinations of—sometimes new—technical and educational knowledge and skills are required, such as digital literacy and analytical computation skills combined with didactic skills, subject matter expertise, and pedagogy. Not to mention, of course, paying much-needed attention to privacy and ethical issues. Secondly, to ensure good quality education, a sophisticated balance must be struck with education in the physical world, so that the indispensable social quality of academic teaching and learning can be successfully realized. Social resources are a prerequisite for good quality education, consisting of

social interactions and relationships between “flesh-and-blood people”, namely between academic staff and faculty and their students, among themselves and with others involved in education.

## Accessibility

What opportunities and risks does online academic education present in relation to another important value of academic education: accessibility? In this chapter on online academic teaching, accessibility is not so much about whether students can enroll in a particular course of study at a university. Rather, it is about gaining access to both good quality academic education and an adequate level of educational resources and facilities, in particular the extent to which academic teaching and learning take place online, blended, hybrid and/or in physical form.

Over the past decade, long before the COVID-19 crisis erupted, it has been demonstrated that online academic education and the use of technology offer numerous opportunities to enhance the accessibility of academic education in general. For example, millions of students from countries all over the world have enrolled in free Massive Open Online Courses (MOOCs) launched by universities (De Boer, Ho, Stump & Breslow, 2014). MOOCs cover a wide range of subject matter that is discussed and pre-recorded by experts along with (online) educational specialists. Students use learning resources, text, audio, and video, and can share their experiences and learn together through social media. Do these forms of online academic education have the potential to serve those who have limited access to higher education from the outset? In other words, can online academic education serve as a springboard to improve access to university education for underserved populations (see, for example, Goodman, Melkers & Pallais, 2017), people from disadvantaged backgrounds, first-generation higher education students, or professionals looking for flexible, low-cost, and efficient ways to advance their academic education and careers? Or, alternatively, does online academic education reinforce existing inequalities in wealth and educational level? (see, for example, Hansen & Reich, 2015) It is too early to make definite statements regarding these particular questions. Both more and broader empirical research is needed to ascertain the true potential of online academic teaching and learning for providing access to university education.

For now, it is expedient to merely consider one possible development, namely that the accessibility of academic education will actually decrease due to the fact that academic education in its physical form will eventually become a scarce and, as such, expensive commodity. Indeed, it is not wholly inconceivable that this is likely to occur imminently, as the course of events brought about by the COVID-19 pandemic means that online education may become the norm, the “default option” if you will, at universities. In the event of this, face-to-face education via real life social interactions between faculty and students may be increasingly viewed as supplementary or an added extra, taking the form of teaching and learning “in real

life” in small classrooms, one-on-one classes by professors in their workspace, or interactive lectures in lecture halls. The fact that online education is often considered “more efficient” from a business perspective—irrespective of whether this is true with respect to the purpose of maintaining educational quality—may increase the pressure to make online academic teaching the default option. This efficiency argument might supplant the qualitative argument that social interactions and relationships are an essential feature of good quality education. In the context of Dutch higher education, the efficiency argument may well find fertile ground, given the problems universities currently face in providing good quality education to the massive number of students due to the huge growth in student numbers.

If academic teaching and learning in physical form increasingly comes to be perceived as supplementary or an added extra, then universities may proceed to both organize it as special modules or components of degree programs and create a barrier for students to enroll in these through stricter selection criteria or by imposing additional tuition fees. In this way, the accessibility of academic education may decline in the sense that students will no longer all benefit from the social interactions and relationships that are required for good quality academic education. Nor will all students be exposed to the “social spirit” of university campuses or invited to participate in it. In this scenario, academic education in physical form is available primarily to those who can financially afford it and/or who best pass the selection criteria. Regarding the latter, prior experience with the selection process in Dutch higher education suggests that the student population on selective programs is less diverse than that on other programs, thus possibly indicating reduced accessibility for certain groups of students. As a result, exclusively “face-to-face” academic education “in real life” may become scarce, when considered from the perspective of the positional economy applied to education (Hirsch, 1976). Scarce in an absolute sense because the “satisfaction [*of being able to enjoy academic education in physical form*] derives from pure social scarcity” (Hirsch, 1976, p. 30).

## Conclusions and Reflection

This chapter has explored how academic teaching and learning may be shaped in the future in light of advancing digitization. It has analyzed some of the various opportunities and risks of online academic teaching with respect to two important values of academic education: good quality and accessibility.

Online and hybrid academic education provide manifold opportunities for shaping good quality academic education. Alongside this observation, an important conclusion is that engaging in online and hybrid education appears to be an intensive and demanding endeavor. Both developing and providing online and hybrid forms of academic teaching and learning require significant additional investment and a great deal of human will, skill and energy, especially in the early stages. In relation to this, the persistent misconceptions that online, blended or hybrid education will reduce the workload of academic staff and faculty

and free up time, and that it is cost effective, pose a profound risk to guaranteeing good quality university education.

Another major concern pertains to the balance between online academic education and academic education in physical form, because if the balance tilts too far toward online academic teaching and learning, then the indispensable social quality of academic education will come under pressure and the "social spirit" of university life will be extinguished. It is precisely regarding this crucial social element of education that the COVID-19 pandemic leaves such deep marks. Universities are important social meeting places and when face-to-face education in real life ceased to be possible, both students and academic staff alike experienced first-hand how essential and indispensable social encounters at university are to them. The COVID-19-related lockdown periods and attendant measures make it incredibly difficult, if not impossible in fact, to give shape to the all-important social aspects of academic education, both inside and outside the classroom. Consequently, all of those social elements of academic teaching and learning, such as a friendly chat with a fellow student or with a professor, space for nonverbal communication and body language in the lecture hall, getting together before or after class, social loafing, extracurricular activities, joint study and collaboration, and university community life, are hindered and strongly reduced. The pandemic demonstrates that the importance of the social function of education is even greater than we originally thought.

Finally, the chapter identified a threat to the accessibility of good quality academic education by exploring the potential development that universities will organize academic education in physical form as either special modules or components of degree programs, and increase the threshold for students to be able to enroll on these through either stricter selection criteria or the imposition of additional tuition fees. This would turn face-to-face academic education in real life into a scarce commodity that is accessible only to some, which, in turn, would put pressure on the accessibility of good quality academic education. It does so, because if students do not receive enough "face-to-face" academic education in real life, then they are also denied the requisite social interactions and relationships and involvement in social academic life that are inherent to good educational quality.

In conclusion, universities need to think carefully about the long-term implications of digitization and increased online academic education in view of two important values of academic education: good quality and accessibility. Although the COVID-19 crisis has led to an unprecedented acceleration in both the adoption of online education and the use of digital technology in academic teaching and learning, and despite the fact that many new insights and ideas for online, blended, and hybrid academic education have emerged in a short space of time, it nevertheless warrants critical consideration. Simply put, for everything that the COVID-19 crisis has brought in technological terms, more has been taken away in social terms (Hooge, 2021). Most notably, the erosion of the all-important social aspect of education—contact between flesh-and-blood people in the real world—may reduce the quality and accessibility of academic education in the future. It is time for a sobering perspective.

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# Fundamental Human Rights and Online Education

Colette Cuijpers

## Summary

Online tools offer manifold opportunities to introduce innovation within traditional education as well as helping solve the problem of how to continue to provide education during a global pandemic. With respect to the right to education, the shift from offline to online modes of education may even stem from positive obligations deriving from the right to education. However, the transition from offline to online education also raises a number of challenges. High-quality online education depends on certain technical preconditions, including the proper infrastructure and minimum software and hardware requirements. What are the consequences to the right to equality and non-discrimination if educational access becomes dependent on both the existence and quality of digital infrastructures and the economic circumstances of students? Another challenge pertains to privacy, insofar as online education heavily depends on video technology deployed within the privacy of students' homes. Particularly with respect to online examinations, forms of video surveillance are mandated by universities, both to prevent fraud and to ensure the validity and value of a diploma. Although in their endeavor to prevent fraud, universities may well have valid reasons for resorting to online proctoring (surveillance software), it is important that this must not disproportionately impinge upon students' fundamental human rights. The rights and obligations of both students and universities are affected by online education, thus creating a need to establish a proper balance between the—often competing—interests. This may require governments and universities to invest in positive initiatives aimed toward accommodating the right to equality and nondiscrimination as well as the right to privacy, in response to the fact that online educational tools may impact upon the private lives of students and, in turn, produce situations of exclusion.

## The Impact of the Pandemic on Education

Ever since the start of the COVID-19 pandemic, there have been a plethora of measures introduced across the globe to prevent the spread of this contagious disease. Travel restrictions, curfews and complete lockdowns are the most common measures taken by governments.<sup>2</sup> These measures have a huge impact upon everyday life, including within the field of education. Although exceptions were initially made for younger children, at least in countries like the Netherlands, to keep primary and secondary schools open, universities were one of the first institutions to experience lockdowns.<sup>3</sup> In March 2020, the vast majority of universities in Europe migrated from on-campus teaching to remote teaching. Although most universities had already embraced some of the initiatives associated with digitally enhanced learning and teaching—such as tools like Zoom as well as systems to electronically provide educational materials and training for lecturers in online learning and teaching—the capacity and familiarity needed to adjust to the situation created by the pandemic was lacking (European University Association, 2020, p. 1). Moreover, similar issues on students' end also prevented a smooth transition to online education, insofar as this requires at the bare minimum some kind of underlying digital infrastructure.<sup>4</sup> Several international organizations have already reported on the long-term impact that COVID-19 will have on our future society, with many children having fallen behind and many more continuing to experience a lack of proper education. Unesco, UNICEF, The United Nations Development Program and the World Economic Forum have all raised major concerns in this regard.<sup>5</sup> Notwithstanding the long-term implications of COVID-19 on education and children's development, the sudden change to online education also raises serious immediate concerns. For example, the impact of the measures taken to bridge the gap between physical and distance education can have a directly deleterious impact upon the fundamental human rights of students. The focus in this chapter is on fundamental human rights as embedded in the European Convention on Human Rights (ECHR), which was the first instrument to crystallize and give binding effect to the rights set out in the Universal Declaration of Human Rights (1948). Despite dating back to 1950, the Convention nevertheless remains a vitally important instrument for human rights protection, insofar as it is able to keep pace with an ever-changing society. The European Court of Human

Rights (ECHR) interprets the Convention dynamically in light of present-day conditions. The Court has clarified and extended the rights set out in the Convention in case law, dealing with situations that were unforeseeable and unimaginable when the Convention was adopted, thus creating a 'living instrument' that adapts to society (European Court of Human Rights, 2021a). In this respect, the ECHR can offer protection against the impact of COVID-19 measures in education that negatively impact upon students' rights. The ECHR thus provides a crucial framework through which to implement new forms of education, fostering the right to education while simultaneously preserving other relevant human rights, such as the right to privacy and the right to non-discrimination.

## The Right to Education

The right to education is embedded in Article 2 of Protocol No. 1 of the European Convention on Human Rights and Fundamental Freedoms. The article states:

No person shall be denied the right to education. In the exercise of any functions which it assumes in relation to education and to teaching, the State shall respect the right of parents to ensure such education and teaching in conformity with their own religious and philosophical convictions. (Council of Europe, 1952)

The provision appears to be a negative obligation: a prohibition to interfere with one's right to receive education. However, the ECHR also acknowledges positive obligations under this right, which is to say that Member States must take measures to ensure that they uphold this right. The right to education is interpreted in a broad manner, for the simple reason that a restrictive interpretation is not in line with the aim of the provision (European Court of Human Rights, 2021b). In the Belgian Linguistic case, the ECHR explained that the right to education included a right of access to educational institutions existing at a given time (European Court of Human Rights, 1968). In the case of *Memlika v. Greece*, the ECHR also ruled that:

Where there is a need for the authorities to take the appropriate measures to avoid any risk of contamination, in order to protect the health of children and teachers, the authorities have an obligation to act diligently and expeditiously in order to reconcile the protection of the interests of the community and the interests of individuals subjected to such measures.<sup>6</sup>

On the basis of these cases, one could put forth the argument that because access to educational institutions must be ensured, providing education online is obligatory during periods where physical presence at schools is impossible due to severe health concerns.

<sup>6</sup> European Court of Human Rights (2021b) under reference to the European Court of Human Rights (2015).

<sup>2</sup> Even though the EU tried to coordinate the measures in response to COVID-19, it mainly was a national matter. See: <https://www.ecdc.europa.eu/en/covid-19/external-resources> and Alemanno (2020).

<sup>3</sup> See for a chronological overview of parliamentary papers and documents about COVID-19 and education in the Netherlands: <https://www.onderwijsconsument.nl/chronologisch-overzicht-kamerstukken-coronavirus-en-onderwijs/>.

<sup>4</sup> According to Angiolini et al. (2020), the pandemic revealed this as a critical weakness of online education, namely "the lack of an adequate digital infrastructure to support the provision of education online, not only during an emergency, but, more generally, in a way that makes the most out of EdTech tools." (p. 68).

<sup>5</sup> See for UNESCO: <https://en.unesco.org/news/one-year-covid-prioritizing-education-recovery-avoid-generational-catastrophe>. See for UNICEF: <https://data.unicef.org/resources/one-year-of-covid-19-and-school-closures/>. See for United Nations Development Program (UNDP) 2020 "COVID-19: Human development on course to decline this year for the first time since 1990." [https://www.undp.org/content/undp/en/home/newscentre/news/2020/COVID19\\_Human\\_development\\_on\\_course\\_to\\_decline\\_for\\_the\\_first\\_time\\_since\\_1990.html](https://www.undp.org/content/undp/en/home/newscentre/news/2020/COVID19_Human_development_on_course_to_decline_for_the_first_time_since_1990.html). See for the World Economic Forum: Li and Lalani (2020).

Consequently, the measure taken to shut down schools needs to be reconciled with the interests of those that are subjected to these measures. This can be explained in terms of providing the means to protect students' right to education, which can be done in the form of online education.

However, as explicitly acknowledged by the ECHR, the right to education is closely associated with other fundamental human rights, in particular, the right to privacy, the right to freedom of thought, conscience, and religion, the right to freedom of speech and the prohibition of discrimination (European Court of Human Rights, 2021b). Hence, even though providing online education may be interpreted as a positive obligation under the right to education, the impact of online education must also be critically assessed in light of other fundamental human rights.

Given that digital tools and platforms offer the possibility to provide education at a distance, they can thus be said to increase access to education. However, the availability of a well-functioning underlying infrastructure allied with certain software and hardware requirements may actually impede equal access to this kind of education. This tension is underscored by Lorente et al., who conclude:

(...) the technological divide between developed and developing nations exacerbates the enormous inequality in educational opportunities between them. The right to education, also in distance modalities, is once again a threatened and non-realized right for children in the most impoverished societies, and for those belonging to the most disadvantaged and vulnerable groups, ranging from women to students with special educational needs. (Lorente et al., 2020, p. 12).

UNICEF (2020) points to other challenges besides the lack of access to remote learning modalities, namely the fact that skill gaps among teachers or a lack of parental support can also undermine children's ability to benefit from remote education. This, in turn, can (re)produce discriminatory situations if the requisite environment for online education is lacking in specific regions or among specific groups within a population.

## Equality and the Right to Non-Discrimination

Even though, at least in principle, technology can facilitate greater access to education, and, in turn, enhance the right to education, it also raises questions concerning the quality of education that is being provided as well as the impact that online education may have on other fundamental human rights. The question of whether online education can meet the quality standards of traditional physical forms of education is a topic of considerable debate.<sup>7</sup> Some research indicates that pre-existing online education tools are unable to

<sup>7</sup> Perspectives differ on the quality of online education. See, for example, Friedrich (2020) and Frutos-Perez (2020).

“meet the educational requirements due to the lack of real-time, two-way, face-to-face communication.” (Yue et al., 2021, p. 47). Despite heterogeneous opinions on the quality of online education, it is evident that technological requirements are a determining factor in successful online education. Both access to and the quality of online learning environments are dependent on several aspects: the underlying infrastructure; the minimum software and hardware requirements; and other factors such as connection speed. This obliges universities to enhance their knowledge of such minimum technical requirements, while, simultaneously, dealing with the budgetary constraints that play a role in establishing a successful online learning environment. As will be explained further in the next section, while opting for cheaper technological solutions may be justified from an economic perspective, it may come at a profound price, such as less security or reduced privacy.

The online learning environment that universities establish also has consequences from students' perspectives. To be able to participate in the first place, students must adhere to certain technical standards put forward by the university. This raises the question of whether online education does indeed foster access to education in situations in which both the availability and quality of underlying digital infrastructures within a certain geographical area and the personal economic circumstances of students are decisive for participation. This is where the right to equal treatment and non-discrimination may come into play. Article 14 of the ECHR states:

The enjoyment of the rights and freedoms set forth in this Convention shall be secured without discrimination on any ground such as sex, race, colour, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status.<sup>8</sup>

From this provision, it can be derived that only discrimination in terms of the enjoyment of the “rights and freedoms set forth in the Convention” is prohibited. However, Article 1 of Protocol No. 12 extends the scope of protection against discrimination to include “any right set forth by law” and, even further yet still, includes any other act or omission by a public authority.<sup>9</sup> This does not mean that a violation of the right to non-discrimination depends on the existence of a violation of another right. That is to say, even if the right to education as such is not violated by providing education online, it may nevertheless result in a violation of Article 14 if online education leads to unequal access to education. This is especially the case given that Article 14 not only covers direct forms of discrimination, but also indirect forms. Direct discrimination pertains to the fact that persons in a similar situation must be treated in an equal manner. Conversely, indirect discrimination

<sup>8</sup> This right is completed by Article 1 of Protocol No. 12 to the Convention which prohibits discrimination more generally, in the enjoyment of any right set forth by law (European Court of Human Rights, 2020). The information in this section is based upon the European Court of Human Rights (2021c).

<sup>9</sup> The scope extends even further, but this is beyond the scope of this chapter. For the exact scope, see the European Convention on Human Rights (2021c, p. 10).

can be explained as “disproportionately prejudicial effects of a general policy or measure which, though couched in neutral terms, has a particular discriminatory effect on a particular group.” (European Convention on Human Rights, 2021c, p. 11). This not only applies to measures taken by government, as the ECHR has also acknowledged the “horizontal effect” of Article 14, which means that it can also apply in purely private situations, for example, in a scenario where a private university takes measures that impact upon equal treatment and non-discrimination. Notwithstanding the negative obligation to not discriminate, the ECHR has also established positive obligations under Article 14, which states that Contracting States are obliged to take the necessary measures to prevent or punish discrimination between private parties or to adopt measures to correct “factual inequalities”.<sup>10</sup>

Therefore, in situations in which measures to move education entirely online disproportionately affect a certain region or members of a specific group, then appropriate safeguards may have to be put in place to correct this factual inequality. As a point of comparison, it is instructive to mention several of the positive obligations considered by the ECHR to make reasonable accommodations for persons with disabilities, to be understood as “necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case.” (European Court of Human Rights, 2021b, p. 13). Even though the term ‘reasonable’ does indicate that budgetary issues may play a role in these matters, the court ruled in the case *Enver Şahin v. Turkey* that insufficient funds to complete all the required adaptations to provide access did not constitute a reason for not having at least started undergoing the development work (European Court of Human Rights, 2021b, p. 14). Moreover, in relation to school fees, the ECHR has also indicated that any restrictions on access to education should not have the effect of creating a discriminatory system (European Court of Human Rights, 2021b, p. 9).

From the above, it can thus be concluded that universities need to consider the implications for equality and non-discrimination when deciding on the technical characteristics of the online learning environment and the costs that this may entail for students. While the interest of providing high-quality online education may be a justifiable reason to opt for certain technologies, the negative impact that this may have on (certain groups of) students may need to be corrected by other measures, such as providing either free licenses for students to use certain software or subsidies for students to acquire the requisite hardware to participate in the online learning environment. In this regard, the impact that certain software or hardware may have on the private lives of students must also be considered.

<sup>10</sup> Leaving room for forms of what is also known as “positive discrimination”.

## The Right to Have One’s Private Life Respected

To mimic a traditional learning environment, two-way interaction and a sense of presence are essential. Video is thus a practical necessity for online learning environments, which, in turn, requires students to have a functioning camera. This camera is situated inside the house of students, and can severely impact upon their private sphere. The home is a place where people can be themselves without the interference of others, which is disturbed by a streaming or recording camera. Elements within the home can reveal all kinds of information about the student living there, such as their economic status (type of furniture and equipment in the house), health status (medicines on the table) and religious beliefs (a cross on the wall, for example). Alongside the lecturers and other students within the online learning environment, the providers of the technology can also have access to the videos and other personal information about the students that is being processed when they register for and use the online education environment. This raises many questions from the perspective of the EU General Data Protection Regulation (GDPR).<sup>11</sup> The GDPR is an extensive legal framework with comprehensive obligations regarding the processing of personal data. An easy first step to take when assessing the legitimacy of the use of technology in education is the privacy test as embedded in Article 8 of the ECHR:

1. Everyone has the right to respect for his private and family life, his home and his correspondence.
2. There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.

The privacy test in Article 8 consists of several questions. First, is one’s private life being interfered with? Second, is this interference justified? This question is assessed based on three steps: Is the interference foreseen by law? Is the interference serving one of the interests mentioned in section 2 of Article 8 ECHR? Is the interference necessary in a democratic society? This final step is judged based on the principles of proportionality and subsidiarity. Proportionality pertains to the question of whether the infringing measure can achieve its intended purpose. If the intended purpose can be achieved by a measure that is less invasive to someone’s privacy, then the principle of subsidiarity has been breached.

The privacy test can be illustrated in relation to the proctoring software that is being used

<sup>11</sup> For example, Angiolini et al (2020) indicate that there are four main issues with online education and the GDPR: 1) allocation of roles and responsibilities of the actors involved; 2) transparency of the processing and possibility to effectively exercise data subjects’ rights; 3) extra-EU data transfers after Schrems II; 4) challenges of e-proctoring systems.

by universities to check the identity of students taking part in an exam as well as to prevent fraud.<sup>12</sup> This software is detested by many students, insofar as it surveils them at home while they are taking an exam, which they deem to be a violation of their privacy.<sup>13</sup> Surveillance during exams is foreseen by law, as it is a public task of universities to provide education, to administer examinations and to issue diplomas, while, simultaneously, guaranteeing both the quality of that education and of the diplomas being issued. The situation generated by COVID-19 created the need to resort to online proctoring software.<sup>14</sup> Universities have a legal duty to provide education, assessments, and diplomas. This is important, both for the economic well-being of a country and in the interest of the right to education. The first questions of the privacy test can thus be answered in the affirmative, which leaves the question of whether proctoring is necessary in a democratic society. As indicated above, this must be assessed based on the principles of proportionality and subsidiarity. The functionality of online proctoring systems—such as monitoring the desk and the screen, disabling certain functionalities, detecting second screens—can achieve the purposes of identifying the student and preventing fraud. The key remaining question is whether these aims can be achieved in another way that is less privacy-invasive than proctoring. To answer this question, careful consideration must be given to the types of assessment that justify online proctoring as well as the functionality of such a system. For many exams, alternative options are available, such as papers, oral exams, and take-home exams. A further interest to take into consideration is whether the alternative examinations will not disproportionately impact upon the workload of teachers. Online proctoring only seems necessary for large-scale exams of great importance, consisting of multiple-choice questions and closed questions that assess one's level of remembering and understanding.<sup>15</sup> Proctoring must also be limited in terms of functionality and duration, only resorting to what is absolutely necessary to achieve the purpose of checking the identity of the student and preventing fraud.<sup>16</sup>

## Conclusion

During a pandemic, moving education to online environments may be required on the basis of the positive obligations stemming from the fundamental human right to education. Such environments can foster access to education, but they can also negatively impinge upon other fundamental human rights.

From the perspective of the right to education and the right to equality and non-discrimination, governments and universities must invest in digital infrastructures that support online education. Moreover, to prevent certain groups of students from being deprived by online education, as a result of social, technical, or economic disadvantages, measures like subsidies for hardware and free software licenses for students should be considered. When creating an online learning environment, choices over which hardware and software to use should not solely be based upon technical requirements and costs. This is because the providers of software, hardware and platforms are not neutral actors within the online learning environment. Rather, they are commercial parties with possible ulterior motives, especially in relation to the huge amounts of data that are being processed in online learning environments.<sup>17</sup> Therefore, fundamental human rights must serve as a guiding mechanism when designing online learning environments. High-quality education—including safeguarding the validity and value of diplomas by taking measures to prevent fraud—must be ensured in such environments, while, simultaneously, also preserving students' fundamental human rights. Therefore, universities must invest in embedding privacy and data protection principles within the design and deployment of remote teaching policies and online learning environments. Moreover, as Angiolini et al also indicate, funding programs should be initiated, and investments should be made into oversight mechanisms (2020, p. 71).

<sup>12</sup> Based on Cuijpers (2020), who provides a more comprehensive analysis of proctoring in light of Article 8 ECHR.

<sup>13</sup> See, for example, Kelly (2020).

<sup>14</sup> In the Netherlands, based on the Act for higher education and scientific research (Wet op het hoger onderwijs en wetenschappelijk onderzoek -WHW), universities are obliged to create rules and regulations regarding examinations, in which the University of Amsterdam has indicated surveillance during exams to be obligatory.

<sup>15</sup> See in this regard also Surf (2020).

<sup>16</sup> A Dutch court came to a similar conclusion based on an analysis of the compliance of proctoring with the GDPR Rechtbank Amsterdam (2020) and Gerechtshof Amsterdam (2021).

<sup>17</sup> See, for example, Goodyear (2019-2020) and St. John (2020).

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## Student Perspective: What Did you Think of Online Testing?

### **Rick:**

'Proctoring can stay as far as I'm concerned. I quite liked it. It's just hard to find the right focus in your own environment. If it's noisy at home, that can be distracting, though. But you are spared the nervous conversations in the hall before the exam. The privacy argument, that you are being watched all the time, I actually find that quite hypocritical. On social networking sites and the internet, you are constantly monitored but nobody thinks that's a problem.'

### **Jamie:**

'I had a lot of trouble with online proctoring. Many things went wrong. My exam was declared invalid because I hadn't performed the actions correctly. The aftermath of rectifying this, and the loads of paperwork involved, was very annoying and time-consuming. That gave a lot of stress. I do understand that proctoring is necessary, and I'm not particularly against it, but then everything must go off without a hitch. The organization and the administration were not up to standard.'

### **Anne:**

'I don't think Proctorio is ideal, but I do understand why Proctorio was used. You can be certain that the exam is fair and valid. Sometimes Proctorio stopped working briefly and then it was tempting to take a quick look at your book. I also took a few exams using TestVision. That was OK, too. TestVision works with time slots, so you cannot go back to an earlier page. I think that, whenever the exams are taking place in person again, Proctorio should continue to be an option for students who are abroad on exchange and want to finish a course.'

### **Milan:**

'All my exams were conducted via proctoring. I was not too happy about that. It went OK with some exams, especially with multiple-choice questions. What was especially tricky was all the conditions you had to meet. A mistake was easily made, and it could have considerable consequences. In my opinion, the burden of responsibility is too much on the student. I had made a small mistake myself and it felt unjust that I was treated so harshly. Especially because I knew that I had not cheated.'

'I do understand that a tool like proctoring is indispensable, but the situation has to be taken into account. Students are already under a lot of stress because of the exam, and then there are all these checks. It's so easy to make a mistake.'

# Online Teaching and Students' Mental health

Jody Oostema

## Introduction

The COVID-19 pandemic presents us with a unique opportunity to experience a hybrid form of online education. The preventative measures implemented by the Dutch government called for universities to close their doors from March 2020 onwards. This closure resulted in an alternate teaching reality that impacted all aspects of education, ranging from homeschooling, reduced interaction between students and professors, alternative forms of education to limiting the possibilities of studying abroad or engaging in internships. These aforesaid changes within the educational sector coincided with the closure of restaurants, gyms, nightclubs, shops, libraries, and other non-essential organizations in the Netherlands. There was an urgent call for people to work from home and avoid public spaces whenever possible.

While the majority of the Dutch population appeared to adjust relatively well to these drastic changes in their lifestyle, Van der Velden et al. (2020) argue that the COVID-19 pandemic has negatively influenced the mental health of specific subgroups within the Dutch population, including university students. According to a study examining the mental health of university students in Jordan, students have been put under extremely stressful conditions during the COVID-19 pandemic, which, in turn, results in a higher risk of developing an anxiety disorder and depression (Nasser et al., 2020). This raises the following question: what precisely are these "extreme stressful conditions", and how do they impact upon students' mental health?

In order to ascertain the consequences of the COVID-19 pandemic for the mental health of university students, I interviewed seven second and third-year students from the Liberal



Arts and Science program about how the COVID-19 measures and their implications for education impacted upon their mental health. According to my findings, the main culprit for the deterioration in these students' mental health was online education. Consequently, although the COVID-19-induced online education was unexpectedly foisted on universities at incredibly short notice, it is nevertheless worth considering its implications for students' mental health when considering the use of online education in the future. In this chapter, I both analyze the consequences of online education for the mental health of university students and assess the possibilities for online education in the future.

## A Cause for Concern: Student Mental Health

The mental health of students has been a point of concern long before COVID-19. In a review of 23 research articles examining the mental health of university students, Storrie and Ahem (2010) found that the most common mental health problems experienced by students are depression and anxiety, alongside a high level of distress. Zivin et al. (2009) found that one-third of the 763 American university students in their sample had some form of mental health problem. Similarly, Bruffaerts et al. (2018) reported that 34.9% of their sample of 4921 Belgian college freshmen had experienced mental health problems during their first year. Different kinds of mental health problems frequently co-occurred, with students who had one type of mental health issue simultaneously experiencing another type of mental health issue (Bruffaerts et al., 2018).

The alarming nature of these findings begs the following question: why do so many students experience mental health problems?

For students, academic study is one of the leading stressors in their lives. Some students go as far as stating that school dominates their life, insofar as they feel pressure to achieve academic success through attaining high grades. Students cite both a high academic workload and the pressure to succeed as compromising their intellectual development and efforts to learn (Conner et al., 2020). This pressure to succeed can be attributed to an internal pressure, but also societal and familial expectations regarding academic achievement and their future plans (Beiter et al., 2015). Consequently, learning for the sake of learning appears to be replaced by a focus on study progression (Conner et al., 2020). This is clearly a serious problem. It is important that students have the will to learn. Not only do intrinsically motivated students perform better than extrinsically motivated students, but they also display a higher degree of happiness and well-being (Dreezens, 2020).

Various studies have investigated the importance of mental health and its subsequent effect on the academic performance of students. The consensus is that students experience a wide range of stressors, such as academic overload, pressure to succeed, and concern about the future. These stressors can cause an increase in mental health problems, such as unhealthy stress levels and fear of failure as well as more serious conditions, such as

depression, anxiety, substance abuse and personality disorders. A poor mental health condition is associated with decreased productivity, work-overload, and a feeling of a lack of support, which might potentially translate into an increase in failing courses, study delays, and, ultimately, even drop-out rates (Dalky & Gharaibeh, 2019). Mohamed et al. (2018) argued that students experience mental health issues because of poor time management and financial instability. Specifically, the authors suggest that a lack of time or resources to keep up with schoolwork causes high stress levels within students. Or, phrased otherwise, emotional distress can cause a decrease in students' grade point average, which, in turn, can cause an increase in symptoms of anxiety and depression. The result of this is that students are then thrown into a vicious cycle of distress due to the limitations placed upon both their educational and personal lives (Storrie & Ahem, 2010).

## Enter COVID-19

This vicious cycle is also observable in research examining the mental health of students during the COVID-19 pandemic. Students already experience heightened levels of psychological distress and the attendant negative academic consequences during normal circumstances, and COVID-19 only serves to exacerbate this level of distress further considering the limitations placed upon social interaction and the shift to online education. Students will likely experience a decline in their motivation to study, increased pressure to study independently, an abandonment of their daily routines, and higher drop-out rates or study delays (Grubric et al., 2020). In their investigation of the main stressors for students during the COVID-19 pandemic, Son et al. (2020) found that out of 195 students at a public university in the United States, 71% indicated experiencing increased levels of stress and anxiety due to the pandemic. Students reported fear and worry over both their own health and that of loved ones, difficulty concentrating, irregular sleeping patterns, decreased social interaction because of social distancing rules, and cited increased concerns over academic performance as the cause of their increased levels of stress, anxiety, and depressive thoughts (Son et al., 2020).

Regarding social interaction, Elmer et al. (2020) drew a comparison between students' social network and mental health prior to and after the COVID-19 outbreak in Switzerland, concluding that students reported fewer social interaction networks and were more likely to study independently. Although friendships and social support groups did not change, in terms of interaction and studying, isolated individuals were at a higher risk of negative social consequences and worsening mental health. This is in line with research that shows that support from family and friends has lasting effects on well-being (Elmer et al., 2020; Schnittker, 2008). Moreover, when students worry about their future career plans, they are at a bigger risk of developing mental health issues, which is often a reaction to stress. One explanation for this is the diathesis-stress theory, which posits that inherently vulnerable people develop an emotional disorder because of stress. In line with this theory, some students may be inherently vulnerable to stressful situations and may develop an emotional disorder due to the complications and consequences of the pandemic (Colodro-Conde et al., 2018).

Admittedly, COVID-19 is an extreme situation where not only educational options are limited, but social options are also heavily restricted at points. An inability to interact with one's social support allies with a lack of coping methods, such as going to the gym. This can have a detrimental impact upon students' mental health. However, given that student mental health was already a pressing issue prior to the pandemic, it is important to consider the specific impact that the COVID-19 measures have on the mental health of students.

### A Brief Look at the Mental Health of UCT Students

By conducting a small survey among 40 second and third-year University College Tilburg students, I found that the vast majority of the respondents (87.5%) indicated that COVID-19 had negatively impacted upon their mental health. The survey measured the frequency of 12 symptoms of stress, anxiety, and depression. Overall, 62.5% of the respondents had experienced at least 8 out of the 12 symptoms of stress, anxiety, and depression. Half of the respondents had displayed at least 10 out of the 12 symptoms. Considering that students cannot self-diagnose, this is not an official diagnosis of a disorder. Rather, it merely serves to indicate what symptoms of mental health issues students at University College Tilburg experienced since the start of the pandemic.

A handful of students (7 out of 40) were asked in greater depth about both the symptoms they were experiencing and what they believed caused the symptoms. The findings of these interviews suggest that students experienced mental health issues as a result of both the switch from campus-based education to online education and being confined to their homes, which impacted upon both their educational and social lives. Due to the COVID-19 restrictions, students felt that they were confined to their screens and homes and missed being around their fellow students. Furthermore, the lack of clear goals and the inability to utilize healthy coping methods, such as sports, because of the COVID-19 measures made students more vulnerable to mental health issues as a result of experiencing a loss of motivation due to being stuck at home and lacking stimulation from their peers and their environment. They also had trouble regulating their emotions due to the lack of contact with their support systems and the scarcity of healthy coping methods, such as going to the gym or socializing at nightclubs. These experiences led to an increase in symptoms of stress, anxiety, and depression.

### The Problem with Online Education

Though by no means the only perpetrator, online education appeared to be the biggest contributing factor in students developing symptoms of stress, anxiety, and depression. The interviewees cited various negative consequences of online education, ranging from a lack of motivation to turn on their camera during an online lecture to going from zoom

meeting to zoom meeting without planning in any breaks. For one student, the COVID-19 educational measures brought about a drastic change in her daily life. She described her lack of structure as follows:

I have dreamt multiple times that I had missed a zoom lecture, so that I woke up in the middle of the night and was looking for my laptop. I thought: 'I have to turn my camera on, but I'm sleeping, and I can't turn up looking like this'. The fact that this has happened multiple times is bothersome. (Interviewee, 20, female).

Students had to rely on themselves to make sure they met their daily obligations. Because of the isolation and lack of structure, students were faced with the possibility of missing out on a lecture without even knowing it.

Notably, students indicated that they felt a drop in their productivity and motivation due to the shift to online education. Six interviewees blamed the lack of on-campus lectures as an important reason for this drop in productivity.

I think that I am slightly more motivated to do my best if I come to campus, where I have a reason to focus and take notes. (Interviewee, 27, female).

Due to online classes, three interviewees tended to procrastinate more.

One effect of having the online lectures or the recorded lectures is that it causes stress by me pushing them off and then eventually having to watch a lot of them. I think that's the biggest issue for me. (Interviewee, 20, female).

Given that it is students' responsibility to plan lectures around their daily schedule, there is a risk that they procrastinate in watching them, which, in turn, results in stress when they end up having to watch them all at once in a short period of time.

With social hubs being closed due to the COVID-19 measures, and students being confined to their homes to avoid the spread of the virus, three interviewees found that schoolwork was the only thing they could do and that the line between study and leisure thus became blurred.

I feel like I am constantly doing things for university. I don't know if it is because I am more efficient now I'm at home or simply because there is not a lot of other things to do. (Interviewee, 20, female).

On the other hand, two interviewees stated that, despite having more free time on their hands, they did not study more. This was very much dependent on the individual person. Generally, the interviewees reported feeling more tired since the start of the pandemic, but that this was not necessarily attributable to changes in their sleeping schedule:

I definitely get more tired. I feel like I'm sleeping more but I get more tired. (Interviewee, 19, female).

Sitting inside and being behind a screen all day seemed to be the main cause of this tiredness, as it made students feel drained and exhausted, compared to being on campus for lectures.

I feel a different type of tired from the 'once upon a time on campus' days. (Interviewee, 20, female).

Study habits and routines were also affected by the COVID-19 measures. Though not all the interviewees indicated a change in their study habits, since they already studied at home prior to the pandemic, all the respondents found it difficult to study at home since the lockdown measures were introduced. Specifically, they were more easily distracted:

Because everything is online, I am on my screen watching the lecture, but I also see my notifications and emails pop up and my phone is on my desk while I am watching my lectures and that really distracts me. (Interviewee, 19, female).

Another interviewee added:

Being at home in front of my computer. . . I get distracted very easily. One person messages me and I'm *done*. (Interviewee, 20, male).

Alongside concentration, productivity, and motivational issues, students also missed the social aspect of education, to the point that it caused additional problems like keeping up with schoolwork. One interviewee indicated that he heavily relied on fellow students when it came to deadlines and planning:

The most negative things I can think of is about my deadlines, planning, having to do stuff [ . . . ] it's really easy to forget and not do anything about it because you are not in contact with other people. So, I think that's the biggest change. (Interviewee, 29, male).

It is not merely about chatting with fellow students in between breaks (be it about the lecture or something else); students also rely on their peers for motivation and to keep up with deadlines and planning. When there is no contact with peers, it becomes the sole responsibility of the individual student to finish work on time or attend all zoom meetings. This can cause an increased level of stress, as evidenced by the interviewee who dreamt about missing zoom meetings.

Based on the findings of the interviews, online education can thus be said to have the most notable influence upon the mental health of the students from University College Tilburg. Although there were other influences that had more to do with the limitations that

the COVID-19 pandemic created outside of the educational domain, such as worries over health and the lack of social contact and social activities, ultimately, the impact of these factors varied for each student, whereas each student indicated that online education had a large influence on their mental health. In the interviews, I asked what the University could do to better accommodate their needs within the COVID-19 limitations. Interestingly, the students found this a difficult question to answer. Four students acknowledged that both Tilburg University and University College Tilburg planned events to increase social contact and help with mental health issues, but they did not attend the events because they thought it was awkward or uncomfortable, or because they were sick of being behind their computer:

I know they have started to create this digital common room, but I cannot be bothered with opening my laptop to go to a zoom vibe type of thing to talk to people I don't know yet. (Interviewee, 20, female).

Hence, despite missing the social contact, students were still not motivated to join online events because they did not properly accommodate their needs. This is a noteworthy finding, especially when considering how online education will look in a post-COVID-19 environment. It seems that students prefer the traditional campus-based lectures, which enable them to interact with fellow students, over the "awkward" online learning environment.

## Conclusion

The COVID-19 pandemic calls for various measures and restrictions to ensure the health and safety of society. One of these measures, the shift to online education, appears to have negative drawbacks for the mental health of students. Admittedly, the online education that was introduced in the wake of the COVID-19 pandemic is an extreme form, especially when combined with the limitations on social contact and outdoor activities. If universities decide to continue with online education in the future, then at least students will be able to engage in outdoor activities such as going to the gym or eating out at restaurants with friends. These activities are important coping methods for students and help prevent the development of mental health issues. Moreover, the scope of online education in the future will not be as large as it has been in the beginning of the pandemic. Hence, to wholly reject online education because of the effects of the pandemic would be a tremendous shame, insofar as online education can allow students to work at their own pace and learn in their own way without the constraints of time or place (Li & Irby, 2008). A further advantage of online education is that it makes education more accessible. Notwithstanding these positive aspects of online education, it is advisable to consider the mental toll of online education upon students, especially in terms of social interaction. Students enjoy and thrive in an on-campus environment where they are surrounded by their peers. My interviews showed that students felt more motivated and productive when

they were around their fellow students, not to mention that on-campus lectures provided students with much-needed structure. Notably, grades were not affected by the shift to online education, so it is worthwhile to also consider the benefits of online learning. More research is required to determine the true extent of the impact that online education has upon students' mental health once all the COVID-19 restrictions have been lifted, as the direct consequences remain unclear. What is clear, however, is that mental health issues among students have been a problem long before the COVID-19 pandemic, and, hence, it is vitally important to help students relieve these mental health burdens, so that they can advance properly in their academic careers. After all, as the educator Dr. Ivan Fitzwater (n.d.) put it in his poem "Only a teacher": "The future of the world is in our classroom today."

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## Student Perspective: Did you Find it Mentally Tough to Pursue Online Education?

### Jamie:

'Definitely. The social isolation was hard on everyone but I think that it may have been even harder for students. They often have side jobs and social activities apart from their studies. If all that stops and only the studying remains, it is a tough job to keep on track. You miss the release moments during downtime and that has had a lot of impact.'

### Anne:

'I was lucky enough to live in student accommodation with twelve other girls. So I didn't end up feeling socially isolated. But I did very much miss the social interaction with friends and fellow students on the campus. I've heard of a lot of people around me who were having a hard time and who struggled with feelings of depression.'

'It was particularly tough for international students. I spoke with a few of them, and they said they were very lonely. For them it was even harder to make friends. It is true that Dutch students are very accessible, but not really inclusive towards international students. And there weren't any opportunities for them to go out and do something fun because everything was closed. I talked to a student who didn't feel connected to Tilburg as a result. "What is the added value of being here at all?" she asked herself.'

## II. Opportunities

# Study Success during the COVID-19 Pandemic: A Multidimensional Approach

**Tessa Leesen**

“In the beginning, the COVID-19 restrictions were somehow a little bit enjoyable because it was nice to be home for a while. But now it is more difficult, because [...] I feel isolated at times”. This extract from an interview on student well-being during COVID-19 carried out by a second-year Liberal Arts and Sciences student at University College Tilburg marks a shift in the way the interviewee experienced the COVID-19 measures, which were implemented to contain the spread of the global pandemic.<sup>18</sup> For four straight semesters, the COVID-19 measures profoundly impacted upon the university experience of a generation of students across the globe. From March 2020 until June 2021, campus-based education was largely replaced with distance learning, while assessment could no longer take place on campus (Motiejūnaitė-Schulmeister & Crosier, 2020). Social activities were either cancelled or had to be shifted online as well, while many students moved back to their parental home. Ultimately, it became harder to make a connection with one’s peers and lecturers, which, in turn, meant that feelings of isolation lurked around the corner, both for the interviewee and many other students. Alongside this, the pandemic also had serious financial implications for a number of students, due to the fact that student jobs almost entirely vanished overnight. This was exacerbated by the fact that the COVID-19 measures were in a constant state of flux prior to becoming more rigid in the past academic year, which offered little hope for relief.

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<sup>18</sup> The interview was conducted by Jody Oostema (2020) as part of her bachelor thesis.

COVID-19 also led to a period of unprecedented challenge for our University College, as some of the foundational tenets of a university college were directly undermined by the restrictions. Education in university colleges is small-scale, intensive, and interactive. However, how does one facilitate in-depth, academic discussions in an online lecture? A university college fosters a sense of community in which students can connect with other students and lecturers in an inclusive environment. This raises the question of how one safeguards this community when students and lecturers are no longer together on campus and all extracurricular activities have either been postponed or cancelled altogether? On top of that, the University College Tilburg staff were concerned about the impact that COVID-19 might have upon students' academic performance and well-being.

Even if this disruptive period might not draw to a close soon, it is apt to take stock of the pandemic's impact upon students, in general, and on their study success, in particular. Specifically, this chapter addresses the following question: "How did university students perform in the context of COVID-19?" In doing so, the chapter draws a distinction between two types of study success: external and internal study success.<sup>19</sup> Within higher education, study success is often defined by external standards, such as grades, access to prestigious programs, study pace and study completion. Whether or not a student attains success in these domains is not solely dependent on the student, but rather is ultimately decided upon by external parties, such as lecturers. Conversely, internal study success is student-centered and defined by how students feel (i.e., affective standards), what they do and how they engage in their studies (i.e., behavioral standards) and what they learn (i.e., cognitive standards). Whereas external study success tends to be recognized as eminent and applauded by others, the attainment of internal study success is particularly rewarding for students. The chapter explores the extent to which the educational restrictions imposed by COVID-19 impacted upon both students' external study success and internal study success. By distinguishing between the two in this way, we hope to offer a multidimensional and multilayered perspective on students' performances during the period of COVID-19.

## I. External Study Success during the Period of COVID-19

In the immediate aftermath of the January 2021 exam period at Flemish universities, there were various newspaper headlines like this: "Students Keep Up Grades Despite Corona" (Maenhout, 2011) and "Corona Does Not Impact Exam Results at Universities and Universities of Applied Sciences" (Gordts, 2021). A survey amongst universities and universities of applied sciences in Flanders displayed that grades, passing rates and drop-out numbers

<sup>19</sup> This distinction builds upon a study by Ablard (1996), who examined parents' conceptions of academic success and found that parents either assessed academic success according to external standards, for example, in terms of grades and college acceptance, or internal standards, such as their children's effort, enjoyment, motivation or individual potential, or both. See also: Van Schalkwyk & Murillo (2020) who distinguish between external success, internal success, and relational success.

had remained stable. Ghent University and the Odisee University of Applied Sciences even presented higher passing rates and lower drop-out numbers in comparison to the year prior (De Maré, 2021). First-year students in particular appeared to have performed better than their predecessors in pre-Covid-times. In response, the *Vrtnews* webpage offered the floor to a random selection of students to reflect upon these unexpected results (Petralia, 2021). The responses suggested that students simply had more time to study in the absence of social activities that would have previously distracted them from studying or participating in lectures. In fact, "there was nothing else to do but study", as one student reported. Moreover, the recording of lectures gave students both the time to rewatch parts of the study materials that were difficult to grasp and the opportunity to plan their studies in a more flexible manner. These newspaper articles caught my attention and raised a number of questions. Could the promising data on study success in Flemish higher education be generalized to other higher educational institutions around the globe? And, furthermore, what about the study success rate at my own institution: University College Tilburg?

At University College Tilburg, the introduction of distance learning did not affect student achievement. There were no significant changes in either the average number of credits that students obtained in their first year of study or the average GPA across the past five cohorts. Also, the number of credits obtained by second-year students or those in later years of study did not significantly change from those seen in pre-covid-times, nor did the average GPA. There are several early studies that have explored the effects of COVID-19 on students' academic performance. The vast number of these studies confirm that COVID-19 measures had either no effect (Novikov, 2020; El Said & Mandl, 2021; Talsma et al., 2021), or a positive effect on student performance (Gonzalez et al., 2020; Loton et al., 2020; Iglesias-Prades et al., 2021).

These findings prompt a new question: what factors enhanced study success during the period of COVID-19? A field experiment conducted by Gonzalez et al. (2020) found that students' improved performance at a university in Madrid were *not* due to modified assessment methods, which potentially allowed for either greater opportunities to cheat or a drop in assessment standards. Students achieved a significant improvement in their grades, even when the format of assessment did not differ from pre-Covid-times. Neither was students' improved performance due to different pedagogic strategies. Rather, there had been a general change in students' learning strategies. Prior to COVID-19, students tended to study particularly hard in the days immediately preceding the exam. This changed during the COVID-19 confinement, as students began to study on a more continuous basis. In response to the uncertainty presented by the pandemic, the authors concluded that students may have attempted to effectively manage their time and pursue a stable study path (Gonzalez et al., 2020). Another Spanish study concluded that the academic performance of students at a different university in Madrid also significantly improved in an online environment (Iglesias-Pradas et al., 2021). This occurred irrespective of class size, the digital tools that were used or the lecturer's preference for synchronous



or asynchronous teaching. The authors cited a number of other factors that contributed to the effective transition to “emergency remote education”, namely, the university’s technical orientation and infrastructure, both the staff and students’ technical literacy and teachers’ autonomy over choosing the appropriate instructional design for their courses. The latter confirms our experiences from educational practice that lecturers have proven to be flexible and creative in transitioning to distance learning as well as being dedicated to providing high-quality education, despite the undoubted difficulty of the circumstances. When choosing an appropriate instruction design for their courses, the vast majority of lecturers at University College Tilburg opted for real-time video conferences, but also experimented with knowledge clips, the chat function, polls, quizzes, and discussion fora.

A study conducted in Afghanistan confirms that technological literacy and infrastructure are prerequisites for study success in an online environment (Hashemi, 2021). Specifically, the study found that deficiencies in these domains had hindered students’ meaningful engagement in online lectures. This, in turn, resulted in high levels of student dissatisfaction with online teaching and a decrease in students’ academic performance at several public and private Afghan universities.<sup>20</sup> Strikingly, the impact of COVID-19 on study success in Afghanistan differed across genders, with female students both reporting lower levels of satisfaction with online teaching and displaying poorer academic performance. This is because male students had both greater resources and better access to technological tools and applications than female students (Hashemi, 2021). The Taliban’s recent takeover of Afghanistan and their educational policies on segregating by gender in Afghan universities has made the position of female students even more precarious and, unfortunately, is likely to further marginalize female students and women in Afghanistan.

The Afghan study adds additional nuance to the optimistic conclusion of most studies that the emergency transition to online education had either no effect or a positive effect on study success. During the COVID-19 pandemic, it is likely that vulnerable groups in society might be affected harder by the transformed educational conditions. For example, a study amongst communities of color in the US found that racial and ethnic minority students experienced “disruptive changes in their finances, living situation, academic performance, educational plans and career goals” and concluded that “while everyone may be experiencing the same storm, everyone is not in the same boat.” (Molock et al., 2021, p. 5). From this perspective, the data collected in the aforementioned Spanish studies may present average study success rates, whilst potentially concealing personal hardships underneath. Consequently, there is a need for more evidence-based research to identify specific groups of students whose academic performance has been negatively impacted by COVID-19 as well as the factors that might (have) enhance(d) the performances of other groups.

<sup>20</sup> The large-scale and global study of Aristovnik et al. (2020) found that African students appeared to be the least satisfied with online lectures and suggested that this might be due to a lack of adequate ICT infrastructure and limited access to the internet.

## II. Internal Study Success during the Period of COVID-19

In an effort to assess students’ internal study success, this chapter specifically focuses on how the COVID-19 restrictions impacted upon students’ emotions, attitudes, and learning behaviors.

Only a few days after the Flemish newspapers published the aforementioned articles on students’ academic performance in an online environment, a student warned about undue optimism. In an opinion piece, she expressed concern over the impact of COVID-19 restrictions on students’ psychological well-being (Vanermen, 2021). Indeed, even before COVID-19, an alarming number of students have been struggling with mental health issues.<sup>21</sup> In this respect, COVID-19 has only made the matter that much more urgent. Van der Velden et al. (2020) found that, during the pandemic, Dutch students were at greater risk of developing symptoms of anxiety and depression than before, whereas the general population was not. Symptoms of depression and anxiety include feelings of sadness, loss of interest in activities, weight loss or gain, issues with sleeping, fatigue, but also uncontrollable and disproportionate feelings of anxiety (Black & Grant, 2014). The negative impact of COVID-19 on students’ emotional well-being has also been confirmed by other studies (Naser, 2020; Sankhi & Marasine, 2020; Aristovnik, 2021). Students experienced high levels of stress because they were concerned about the impact that the pandemic might have on their educational careers and employment opportunities, but also about the possibility of infecting family members and friends (Aristovnik, 2021; Sankhi & Marasine, 2020). Although higher education institutions started taking initiatives to support students long before the pandemic, student well-being continues to be a key point of concern for programs and educational policy makers.

Studying online and in isolation raises many challenges for students and demands a strong degree of self-discipline, time management and self-regulation skills. COVID-19 restrictions profoundly disrupted students’ daily routines of getting up in the morning, having breakfast, and commuting to the university to attend lectures and socialize with their peers (Aristovnik, 2021). In an interview series on students’ coping strategies during COVID-19, one student reported that they attended “many online lectures from bed with the camera off, or whilst making breakfast”, whereas another student added: “You become

<sup>21</sup> Although recent research by Van der Velden et al. (2019) concludes that the psychological problems of Dutch students did not increase between 2007 and 2017, and that students do not face more psychological problems than persons of the same age that do not study, a significant percentage of students nevertheless face mental health issues. A YouGov survey of Britain’s students showed that 27% of the respondents reported having a mental health problem. See: Aroning et al. (2016). Also in the US, students reported experiencing stress to the extent it negatively impacts upon their mental health: Mortier et al. (2018). The University College Student Representatives of the Netherlands conducted research on the mental health of Liberal Arts and Sciences students in the Netherlands in a survey consisting of 391 students. They found out that 50% of University College students believed that they did not have a mental health disorder, whereas the remaining 50% were relatively equally divided between: being diagnosed with a mental health disorder (19.7%), thinking they have one (14.3%) and questioning whether they have one (15.6%). Unpublished report from the Executive Board of the UCSRN (2018-2019).

very lazy. You are sitting there in jogging pants [...] whilst taking an online class.” (Nijhoff, 2021). Research demonstrates that the absence of daily routines triggers negative emotions in students, such as frustration and boredom (Aristovnik, 2021), and often results in lethargic behavior (Sankhi & Marasine, 2020, p. 5). This might explain students’ strong preference for real-time video conferences at our own University College, insofar as they assist students by helping to add structure to their day.

With respect to the online domain, students lamented the lack of social interaction and expressed an acute loss of motivation to follow the course via online lectures. Research with a small-scale sample of Dutch psychology students confirms this, as they found that the transition to distance learning led to a drop in academic motivation (Meeter et al., 2020).<sup>22</sup> As a result, students invested less time and effort in their studies and attended lectures less frequently (Meeter et al., 2020). In the interview series on students’ coping strategies during COVID-19, an interviewee reported that they skived off: “I had two screens in front of me: on the one screen I was following the lecture, and on the other screen I was playing a video game. I figured that if I would miss out on something, I could always rewatch the recorded version. To be honest, this was something I rarely ended up doing.” This loss of motivation is explained in the literature as deriving from a combination of video call fatigue and studying in isolation (Novikov, p. 21). As students were no longer able to rely on social integration and interactions with peers to foster self-discipline and motivation, they experienced less enjoyment in their learning experiences (Meeter et al., 2020). Despite this acute lack of motivation, the average student indicated that they studied more efficiently during online education, so that the diminished time investment did not automatically result in a drop in their grades. This finding illustrates the paradox of study success. Although students managed to keep up their academic performance during the period of COVID-19, their will to learn has been seriously put to the test.

## Conclusion: The Paradox of Study Success

This chapter explored the question of how university students performed in the context of the early stage of the COVID-19 pandemic. The answer to this question depends on which definition of study success one employs. When narrowly defined in terms of grades, study progress and study completion, extant literature suggests that the transition to distance learning had either no effect or a positive effect on students’ academic achievement. Since these are average data, the danger is that they might conceal the ways in which individual students or vulnerable groups, such as, for example, female students in Afghanistan, experienced significant hardships and difficulties in keeping up with the academic pace. Underneath the façade of grades and credits, research shows that students have been

<sup>22</sup> See also Tan, (2020); however, Pasion et al., (2020) did not find that online education had a significant impact upon motivation levels within their sample of undergraduate business students at a Portuguese university.

struggling with how they feel and engage with their studies. Above all, the COVID-19 restrictions have deprived students of their daily routines, with the result being that students have tended to feel less motivated to study and, in turn, experienced less enjoyment when learning. Students have displayed lethargic behavior and are at risk of disengagement from their peers and the university as a whole. They have been at a greater risk of developing symptoms of stress, anxiety, and depression than other groups in society. This might derive from the fact that students are emerging adults, who dwell in the no man’s land between adolescence and adulthood (Arnett, 2015), and, as such, have not yet fully developed the required skills to stand firm in the midst of a pandemic and radical transformation of their education. Students who are not (yet) equipped with skills such as self-discipline, self-regulation, and time management, and who have not (yet) developed the required degree of resilience to adequately deal with the uncertainties of a global pandemic, have been in dire straits over the past nearly two years. This conclusion illustrates that a one-dimensional focus on study outcomes in higher education is unproductive. What is the purpose of attaining external study success without internal study success? In distinguishing between both types of study success, this chapter counterbalances this singular focus on study outcomes in higher education and, in doing so, paves the way for a multidimensional and multilayered perspective of students’ performances.

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## Student Perspective: What Went Well and What Went Less Well?

**Rick:**

'One of my teachers started calling students by their names, whether or not they had their cameras on. That is a very direct way of involving students: they literally felt addressed. That worked really well. A different teacher didn't, and you could see a difference in the participation level of the students.'

**Anne:**

'Many skills courses were taught online and I didn't learn anything, to be honest. For instance, interviewing techniques: how to deal with clients, how to interpret non-verbal communication. I had to practice online with fellow students; it did not work for me. I didn't receive any feedback until three or four weeks later, but by that time I couldn't remember what I had done. You have to receive feedback immediately, so you can apply it there and then.'

'Live online lectures worked better for me than prerecorded videos. You can ask questions during live lectures. That helps me to 'stay tuned', even if interaction is difficult. You tend to ask different questions online, afraid that you'll ask a stupid question. If you have in-person classes, you can buttonhole the instructor during the break or after class if you have any questions. I missed that a lot with the online lectures. You cannot build a relationship with your teachers. It's all very impersonal.'

**Allisha:**

'One example of a course where things went well was Conflicts of Laws. This course consists of a diversity of elements throughout the year, which provided welcome variation. It also resulted in more interaction. We even had an online moot court, in which we could practice oral arguments. This normally takes place in a physical setting, but it turned out to also work very well online.'

# Organizing for Innovation

Jeroen Kuilman & Aswin van Oijen

The COVID-19 pandemic disrupted the higher education landscape to its very core, with Tilburg University being no exception in this regard. It required a sudden shift away from well-established methods of delivering education and examinations: remote forms of education became the new norm, which required a set of resources, processes and values that were not innate to Tilburg University. In this essay, we discuss key ideas from extent academic literature regarding innovation, the development of new resources, processes and values, and the ensuing challenges that they present. We will also discuss how exploring new innovative forms of education and examinations built on new premises can co-exist alongside traditional ways of delivering education and examinations. As part of this process, we reflect on how Tilburg University is currently organized for innovation as well as offering suggestions as to how the University can organize its innovation processes more efficiently to remain competitive in the higher education market. Finally, we explore process innovation, for the purposes of promoting teaching effectiveness and efficiency.

## Disruptive Innovation

Innovation comes in many forms. Within a university, it can, among other things, pertain to how the university functions as an organization as well as what it offers to students. Innovation in higher education can be as simple as merely adding new articles or assignments in a course. Such forms of innovation are known as 'incremental innovation', and in this sense we can say that courses improve every year, by virtue of course coordinators adopting new insights from scientific literature, learning from best-practice examples of colleagues about how to deliver a course and learning from students' evaluations.

The COVID-19 pandemic necessitated a more profound change in the educational land-

scape, and, in turn, called for more significant innovation, which is typically referred to in academic literature as radical, discontinuous, or disruptive innovation. These forms of innovation are more difficult to realize, and there are manifold examples of large companies that failed due to their inability to cope with disruptive new technologies (for instance, Nokia in the smartphone market or Kodak in digital photography). This raises the question of why such disruptive changes are so difficult to deal with. According to innovation scholars Clayton Christensen and Michael Overdorf (2000), the reasons can be found in organizations' *resources, processes, and values*.

Starting with resources, more disruptive or discontinuous innovations require significant funds, not to mention great time and effort. Needless to say, these are scarce *resources* in contemporary higher education where work pressure is already high because of ever-growing student numbers. In this sense, Tilburg University is no exception. Delayed government funding and tight job markets make it challenging for staff to keep up with student numbers, let alone to invest substantially in new modes of teaching during strenuous periods.

However, even when organizations have abundant resources (evidently Nokia and Kodak had abundant resources when they were still market leaders), there may still be *processes*, unbeknownst to the organization, that prevent them from adapting. New and disruptive product or service innovations may conflict with established ways of working. For instance, when classes had to be re-scheduled online, the opportunity to schedule lessons asynchronously signaled a marked departure from previous ways of planning in higher education. Moreover, when examinations had to be conducted online and in many cases with proctoring, the necessary support structure was not yet in place and, as such, procedures had to be developed from scratch.

Offering classes in a fully online or hybrid form also conflicted with the *values* of many within academia who viewed personal interaction with students as the cornerstone of their teaching. Indeed, the very possibility to sit down with students to discuss materials or to interact with them in a real-life lecture is what attracted many to the profession in the first place. Alongside this were also reports from students who saw online education as poor value for money (BBC, 2020).

### Ambidexterity

These issues do make it somewhat challenging to foster disruptive innovation within established organizational structures. In principle, each employee could spend some proportion of their time on exploring new innovative ideas if the context is right, while, simultaneously, continuing to exploit current capabilities (Birkinshaw and Gibson's (2004) notion of contextual ambidexterity). Yet, the processes and values that are already in place currently prevent people from making large-scale investments in new ways of teaching.

In the initial stages of the pandemic, faculty members wondered whether making investments in, for example, producing knowledge clips would be worthwhile if they were later of no use after the pandemic subsided. In other words, if the university planned to move back completely to offline teaching after the pandemic ends, then their investments would have been in vain.

The academic literature also offers more structural solutions to managing disruptive innovations. This solution entails the possibility of creating separate organizational structures for experimentation with more fundamental forms of innovation. This concerns what O'Reilly and Tushman (1996) refer to as 'structural ambidexterity'. These authors define structural ambidexterity as "The ability to simultaneously pursue both incremental and discontinuous innovation...from hosting multiple contradictory structures, processes, and cultures within the same firm" (1996, p. 24). As Leufkens and Manderveld explain in this volume, it was precisely this notion which led to the founding of the EDUiLAB in 2018 at Tilburg University. The EDUiLAB was designed as a breeding place for radically new educational innovations. The notion of structural ambidexterity is predicated on the belief that radically new innovative forms of education and examinations can best be nurtured and developed alongside traditional ways of delivering education and examinations, because doing it in this way means that they do not necessarily interfere with existing processes and values.

### Organizing for Innovation at Tilburg University

At Tilburg University, several other entities have been established to spur innovation in education. Alongside the EDUiLAB, there is also a DEEP board at the central university level that supervises the Digital Education Enhancement Program, which includes projects such as the development of Thesis File. Then there is also the Teacher Development unit of Academic Services which houses expertise in educational science, the abundance of technical expertise within Library and Information Services (LIS), and the newly founded Tilburg Center for the Learning Sciences. There is also the learning analytics initiative that was pioneered at the Tilburg School of Economics and Management (TiSEM), and the innovation coordinators who are active in the various schools of Tilburg University. All these entities and actors play a pivotal role in the organization of innovation within our University. The logical question to ask is whether these entities and actors are connected appropriately and in a logical manner by examining the innovation process.

Innovation scholar Henry Chesbrough (2003) sees innovation not as an instantaneous event of chance that occurs, but rather as a process that can be depicted as a funnel (see Figure 1), where ideas enter the funnel on the left-hand side and develop into projects and products that are ultimately ready for the market (in the context of Tilburg University: education offered to students) on the right-hand side. A key consideration is that the process should not limit itself to the walls of the ivory tower. Chesbrough (2003) coined the term

'open innovation', to describe how ideas originate not only from within the organization but also from outside it. In Figure 1 this is represented by the dotted line (as opposed to a solid line) which allows for projects moving both inside and outside of permeable boundaries.

In the context of the university system, ideas can come from any school on campus as well as from outside parties. These outside parties could for instance be other higher education institutions or platforms such as SURF (the collaborative organization for IT in Dutch education and research). Any formal structure to guide ideas from exploration to implementation should be open to and even actively seek out such broad input. This is not something that comes naturally necessarily, as in higher education institutions there is also an observed tendency to rely on self-developed teaching materials, rather than replicating materials and tools used in other institutions (something that Chesbrough (2003) refers to as the 'not-invented-here syndrome'). On the other hand, there may be a broader market for products and services developed at Tilburg University, which could be subsequently licensed to outside parties.

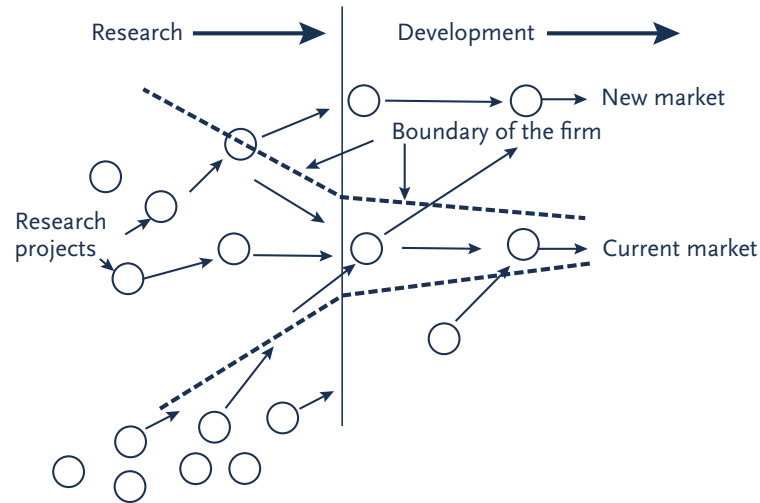


Figure 1: The open innovation funnel (Chesbrough, 2003, p. 37)

The current organization of innovation at Tilburg University can be mapped using this funnel. For instance, EDUiLAB is clearly positioned in the early gestation phase of new innovations on the left-hand side, while one could certainly argue that an entity such as DEEP is located more on the right-hand (development) side of the funnel. How various other entities should be mapped is less clear and thus requires further consideration.

With respect to the expertise that is needed to bring ideas from the idea stage to effectively offering them to students, it is clear that a key success factor lies with the ability to identify new ideas—both internal and external—and bring those into the funnel. Next, expertise from those from both a technical background and a background in educational sciences

is essential within various parts of the funnel. In addition, learning analytics tools can be applied throughout to measure the potential benefits of new innovations. This would be in accordance with the Plan-Do-Check-Act cycle (Deming, 1986), where we not only plan and develop new ideas but also verify via the use of learning analytics tools what their effectiveness is for improving study performance, for example. This, in turn, allows us to act accordingly in further improving and ultimately implementing the project.

In terms of the Check function, an oversight board that combines the required expertise could also serve as a gatekeeper to decide at key points in the innovation process whether an innovation is allowed to continue to be researched and developed (and thus move deeper in the innovation funnel). However, the oversight board should not apply traditional criteria too rigidly when evaluating projects (Christensen et al., 2008). This is because disruptive innovation is sometimes characterized by long gestation periods, while not all investments achieve the ambition of realizing actual benefits for staff and students. The innovation funnel in any event provides a vantage point from which to re-map how the various entities and actors at Tilburg University interrelate, in addition to seeing how these could be further aligned to best bring new offerings in education and examinations from the idea stage to actual implementation.

When reflecting on new organizational structures for managing disruptive innovation, a critical question will be where to locate such activities: close to the primary process of education or in a central and structurally separate entity. A key challenge in institutional entrepreneurship, one which is also extensively underscored in academic literature, is to strike the right balance between integration and separation (Christensen & Overdorf, 2000). On the one hand, the innovation process needs to be separate from the primary process to allow it to grow with a different timeline, risk preference, and cultural context. On the other hand, innovative ideas typically originate from the primary process itself, and, therefore, when the innovation process is organized at a distance, the lack of integration may prevent ideas from being picked up. In addition, ideas ultimately also need to find their way back into the primary process and be integrated into various courses offered to students. This is also an important consideration when potentially remapping the organization of innovation at Tilburg University.

## Process Innovation

Picking up on the question of where to locate innovation activities: A particular challenge in higher education institutions such as Tilburg University is that the primary processes of education and research are staffed by highly-trained professionals, who are directly in contact with students. So, yes, locating innovation activities in a structurally separated unit in theory allows innovations to develop in a way that is not burdened by the routines, culture, and other constraints of the existing organization. However, the innovations are subsequently not likely to be adopted in the primary process. Indeed, the professionals



there often have a fundamental distrust of innovations that have been developed by education specialists, who usually have little experience in dealing with hundreds of students on a daily basis and, hence, come up with solutions that are insensitive to the particular needs of the teachers and their students. Consequently, in an institution such as Tilburg University, the teachers will always have to play a significant role in the development and implementation of any innovations.

To be able to innovate, teachers need slack resources, including time. However, in practice, the work pressure that teachers must cope with has risen steadily in the past decade. Alongside this, the number of students has increased, and funding did not keep up (Strategy & 2021; VSNU, 2021). In addition, the efforts required for compliance with rules and regulations rose. As one would imagine, the COVID-19 pandemic has only increased this work pressure. In principle, the pandemic has created the perfect conditions to accelerate fundamental trends in education that were already going on. For example, even prior to the pandemic, technology enabled the use of video in our teaching and students actually requested this to be used more. The COVID-19 pandemic and the attendant governmental measures necessitated that this innovation had to be adopted, because the alternative in most cases would have been no teaching at all. The result of this is that teachers had to quickly acquire new skills and move all of their teaching online, without being allocated additional time for this. Admirably, our teachers absorbed these pressures and were able to deliver good education.

However, we cannot keep expecting teachers to handle the extra work resulting from rising student numbers and other challenges. Their research and outreach activities, not to mention their private lives and mental health, will invariably suffer as a result. Therefore, we need to review and perhaps modify our traditional way of working. In other words, we need to move beyond the idea that innovation involves the introduction of new technologies, products, and services to instead embrace process innovation.

Process innovation at an institution like Tilburg University can come in a wide variety of forms. Here, we briefly mention three types of process innovation that we at TiSEM are currently experimenting with. First, we can more actively manage our portfolio of activities. Once educational programs, tracks, courses, and teaching methods have been added, there is the strong tendency to preserve them, even when they no longer offer substantial added value to students and society. Therefore, we should frequently review our activities and be prepared to let go of those that are no longer viable, so that we can focus our efforts on the activities that do truly add value. Secondly, we could outsource educational activities to a larger extent. Universities have a strong tendency to operate in an autarkical way. At most, we are prepared to adopt externally written textbooks. All other teaching activities are supposed to be developed and executed within the boundaries of the university or even school or department, even if we lack the expertise and scale to do so effectively and efficiently. In contrast, we could seek to leave such activities to other parties within the university or even collaborate with external platforms and suppliers such

as Udemy, edX, Coursera, TrainTool, and Grasple. Thirdly, we could also have more task specialization within departments. We have a strong tendency to hire a jack-of-all-trades, that is, a professional who is good at teaching, research, valorization, and administration. Within education, we expect that such a professional can design courses, create materials, deliver lectures, run tutorials, grade, and supervise theses. “Room for everyone’s talent” represents the first attempt to recognize that academics do not have to excel at everything (VSNU, NFU, KNAW, NOW & ZonMw, 2019). However, we should investigate further if we cannot, for instance, have colleagues who excel in designing materials focus on that, colleagues who are good at delivery run the classes, while those who are efficient in grading could assess the assignments and exams.

As suggested, there are many more ways through which to innovate our teaching processes, involving, among other things, modularization, new revenue models, and evidence-based education. However, if we are not careful, we will be caught in a catch-22 situation. In the medium to long-term, we expect process innovations to have a major impact on our teaching effectiveness and efficiency. In the short-term, however, they will cost time to develop and implement. This is problematic, given that time is not a resource that is amply available, particularly during the last few years, when we have been incredibly busy putting out fires and absorbing ever increasing student numbers.

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## Student Perspective: What Was the Crucial Difference from on-Campus Education?

### Jamie:

'What I saw was that the online classes were very stressful for the instructors, which was detrimental to the quality of the class. I saw that the instructors didn't like it that not everybody had their camera on. The instructors felt like they were talking to a wall, and that was very clear in the way they communicated. Instructors tend to react to non-verbal signals, but if all you can see is names and black squares, you're unable to act on these signals. I can imagine that it must be very discouraging for instructors if they cannot see their students. I noticed that they discussed information only briefly, skipped slides, etc. During the first online lecture, students still had their cameras on, but soon you saw people switching them off. If one student starts, the others are quick to follow.'

### Milan:

'Other instruction methods were used: Q&A sessions, prerecorded lectures, live lectures that were recorded so you could watch them again later. The advantage is that the material is always available, also just before the exam. But there is less engagement in online classes. Your screen only shows the instructors. That's weird. You miss the non-verbal communication. And personally I find it hard to ask questions. It might feel like too much interruption for the instructor.'

# Exploring Blended Learning

Sander Bax, Petra Heck & Amy Hsiao

## One Thursday Afternoon in February 2020

On Thursday, February 27 2020, the Faculty Council of Tilburg School of Humanities and Digital Sciences (TSHD) discussed a document that formulated ideas for introducing educational innovation within the School, which was titled *Well-considered Digitalisation*. The plan proposed to stimulate and support teachers to develop initiatives to both innovate their education and embed online learning elements within the curriculum, through video lectures and experimenting with online courses, for example. The plan sought to make TSHD's expertise in the field of digitization and education more visible.

Although it was a fairly nuanced plan, there was fierce discussion over it in the Council, especially between students and teachers. On the one hand, students emphasized the need for video lectures to provide them with greater flexibility, while, on the other hand, teaching staff expressed concern over the additional workload that these initiatives might bring with them. We (PH & SB) were a little bit puzzled when we left the meeting; these divergent perspectives on the innovation plans forced us to further investigate how best to proceed with its implementation.

That Thursday, February 27 2020, would turn out to be a historical day in the Netherlands for another reason: it was the day when the very first Dutch COVID-19 case was confirmed, in the Elisabeth-TweeSteden Hospital in Tilburg. Within a week, the university established its 'working group education COVID-19', which had daily crisis team meetings to discuss how the University should deal with a health situation that was bound to quickly engulf us. What started as a national 'intelligent lockdown' for a limited time only would turn out to last for quite an extended timespan. During the COVID-19 crisis Tilburg University's education would be completely (in the case of a full lockdown) or mostly (in the case of the 1.5 meter distance restriction) offered online.

What had been discussed so extensively in the Faculty Council (more online education where possible and preferred), all of a sudden, in the space of only three weeks, became the hard reality for both our students and teachers: all of our education moved online, courses were redesigned within days into online courses ran via Canvas and Zoom, teachers made video lectures through My Mediasite and all exams had to be conducted in a new, digital fashion, sometimes involving digital proctoring. The period spanning March to June 2020 was the most intensive and disruptive period in academic education that we had ever witnessed!

## What We Learned from Online Education

From March 2020 onwards, working and teaching online (sometimes in a hybrid fashion, combining online and offline educational elements) became the ‘new normal’ for all of us. It soon became clear that online teaching was something completely different from on-campus teaching. How do you get students to process online lectures in such a way that they learn what you want them to learn? How do you activate and motivate students in a Zoom environment in such a way that makes it easier for them to respond at the appropriate moment in an appropriate fashion? How do you redesign your on-campus paper exams into digital exams (with or without online proctoring)? And finally, how do you maintain a human relationship with students when they are so far away behind a screen?

Over the course of a few weeks and months, our teaching staff learned to deal with these complex educational questions while doing their job. It would turn out to be an incredibly intensive period spanning more than one and a half years for both teachers and students. The pandemic required a lot of effort from our teaching staff who had to adapt to a new educational situation in a very short space of time. We have all pushed ourselves to the limits to keep education afloat—which we managed, at least so we dare to believe, while learning a lot along the way.

On October 29 2020, and June 9 2021, TSHD organized educational afternoon sessions in which teachers presented some of the innovations that they had created during the COVID-19 pandemic. Teachers informed each other, among other things, about the use of online quizzes and polls for ‘on-the-fly-assessments’, about the didactic benefits of a digital platform that facilitates students to provide peer-to-peer feedback on each other’s videos, about the use of pre-recorded, animated knowledge clips and live tutorials to improve learning. Initial experiences with hybrid teaching were also shared (one presentation was titled “How to not forget half of your students”).

A session with the brilliant title “Easy peasy tricks that enhance students’ engagement, interactivity - and most important: fun! - without any additional workload for lecturers” was very well-attended. Students also joined in the conversation and discussed their own experiences with online learning with the lecturers. In particular, they emphasized the benefits of recorded lectures, the importance of a clear structure, sufficient variety, the need

for contact with both lecturers and fellow students, while also emphasizing the demands that are placed on their self-discipline when all teaching is done online.

These educational afternoon sessions clearly showed that teachers had experimented effectively with various ways of implementing online elements in their teaching. While not many teachers and students prefer online education over on-campus education, there are certain parts of online education that lecturers and students want to keep in the future<sup>23</sup>. Supplementing traditional on-campus education with digital materials (and thus creating so-called ‘blended learning’) has proven to be one incredibly inspiring way through which to innovate education and offer students greater flexibility.<sup>24</sup>

During the COVID-19 pandemic, we also learned that many different forms of support are needed to foster a culture in which teachers are able to improve and innovate in their teaching. The central element here is that support should be organized close to the teachers. In the old situation (on-campus teaching combined with the Canvas digital learning environment), it was perfectly possible for a teacher to prepare their course either completely independently or in consultation with a colleague—albeit support sometimes had to be requested regarding certain functions of Canvas or another tool. This model in which support was provided solely by a centrally located service team usually worked fine for this purpose.

We have learned now that in a situation where online/blended learning is the starting point, much more is required of the instructor than merely preparing a number of lectures, tutorials and assessments. We see that close collaboration is needed between lecturers, course designers, assessment specialists, educational technologists, and support staff. We think that preparing education in these times becomes much more of a team effort. In this area, too, we can safely speak of a cultural shift in university education.

## Blended Learning

In the spring of 2021, we participated in a working group that was tasked with providing advice to the Executive Board about education, educational innovation, and assessment for the next academic year (and beyond). In its advice, the working group formulated the following ambition to further develop and implement the concept of ‘blended learning’:

<sup>23</sup> *Results Survey Online Teaching II* (among lecturers), January 2021, Marketing & Communication Division (p. 4): Lecturers wish to deploy the following forms of education more frequently in the future: (1) knowledge clips, (2) pre-recorded lectures from home, (3) hybrid lectures and (4) live-streamed lectures from home.

<sup>24</sup> See for instance: *De toekomst van blended onderwijs is gestart: Wat leren hogescholen en universiteiten van de Coronaperiode* (2021). There were several surveys among Tilburg University’s lecturers and students as well: *Results Survey Online Teaching* (among students) November 2020, and *Results Survey Online Teaching II* (among lecturers), January 2021. Both surveys were conducted by Tilburg University’s Marketing & Communication Division.

Blended education concerns the marriage of face-to-face and online education, with each of those elements reinforcing and enhancing the other. In other words, traditional lectures are supplemented and enhanced with studying in a digital environment, in which students are given access to digital educational material and can study in their own time, in other words, blended learning. The main goal is to develop education that uses IT to make efficient, effective, and flexible learning, with an increase in learning efficiency for the student and improvement of both lecturer and student satisfaction. Blended learning helps us meet student expectations and optimize the use of educational technologies. The student is empowered to absorb much of the required knowledge and insight through autonomous studying, alone or in groups, and at the time and place of his/her choosing. The contact moment in the classroom can then be used for in-depth discussion, applying the knowledge and insights already acquired and reviewing the most challenging areas of the subject matter.

The report states that blended learning offers greater flexibility and caters to the needs of students and staff by (1) making it possible to integrate the best elements of on-campus education with the best elements of online education, (2) offering lecturers more opportunities and more flexibility in designing their courses, including their assessments, (3) offering more opportunities for programs and courses to meet students' individual learning needs, (4) helping the university to expand their didactic and pedagogical expertise and (5) by providing students with the opportunity to better prepare for classes and thus participate in learning activities at a higher cognitive level (according to Bloom's taxonomy). The report underscores the ambition to both create an innovative educational culture at Tilburg University and strengthen a research-based approach to educational innovation. It also recommends including blended learning in the follow-up steps of the Tilburg Educational Profile (TEP), by, for example, making academic character-building elements visible within the programs and supporting experiments (such as trying out new tools) to stimulate an innovative educational culture.

This ambition to innovate, especially in the midst of the pandemic, aligns with the TSHD Educational Innovation Plan that was created in March 2021.<sup>25</sup> The plan describes the principles for further development of an innovative educational culture within the School. On the basis of input from the various departments, it was decided that blended learning would be further developed, educational innovation would be encouraged and supported even further than before, and that we want to design and implement procedures that will ensure that we can better track and examine the effects of these innovations<sup>26</sup>.

<sup>25</sup> See: Bax, S. and P. Heck, *Towards a future-proof curriculum. Educational Innovation Plan Tilburg School of Humanities and Digital Sciences*. Tilburg, March 22, 2021 and *Shaping our future society together. Strategy 2022-2027 Tilburg School of Humanities and Digital Sciences*. Tilburg, July 2021.

<sup>26</sup> We are using a broad definition of educational innovation: change, renewal and improvement using a new approach or technology.

The plan also states that various programs will focus on the following TEP-related topics: strengthening critical academic skills, elaborating on sustainability and diversity within curricula, and emphasizing employability. The TSHD programs have several plans in the pipeline for TEP-related topics. In addition, we will work together to further develop blended learning.

Both Tilburg University and TSHD want to realize an innovative culture where educational experimentation is encouraged on a small scale, using trends and developments we see in education. As a research institute, we have a responsibility to carefully monitor the follow-up effects of educational innovations by improving and stimulating research in and about education (e.g., learning analytics, educational design research, and other forms of innovative educational research).

In the fall of 2020, TSHD established the Tilburg Center of the Learning Sciences that will play a crucial role in bringing together campus-wide research projects (both quantitative and qualitative research) that both monitor the effects of implemented educational innovations (learning analytics) and collect examples of good practices of evidence-informed education. Apart from research on education, there should also be a place for experimentation and space for lecturers to integrate new didactic methods and tools into their courses and to share educational experiences with each other. It is also important to encourage and support the application of grants for educational (research) projects more explicitly, for example, by means of an incentivizing policy for this.

The need for such a center of the learning sciences, which will strengthen effective educational flexibility, cannot be stressed enough given what we have witnessed over the course of the pandemic: as a university and School we need to anticipate contexts that suddenly demand new ways of academic teaching. To promote and develop innovative strength within programs is therefore a mandatory requirement.

## Toward an Innovative Educational Culture

In 2021-2022, TSHD wants to take a big step toward realizing our ambitions when it comes to fostering an innovative educational culture. To this end, we will implement a faculty-wide Educational Innovation Project which investigates the ways in which blended learning can function as an effective element within our courses, especially in the longer term. This innovation project is meant to serve as a central focus point that stimulates all kinds of other initiatives that already exist in our educational programs.

With this project, we first want to be clear about precisely what blended learning has to offer to our courses (and thus teachers and students), that is, what its added value can be, before then working out some good examples of this. Importantly, in so doing, we hope to incorporate the lessons learned during the pandemic into our blended learning scenarios and develop them further. In other words, we would like to retain the things that worked well and improve upon the parts that did not work so well. The important questions we aim to answer through this project are:

- What is our School's definition of blended learning?
- Which didactic and pedagogical elements are relevant for our School's educational programs?
- What implications does blended learning have for educational design, both at the program and course level?
- What kinds of issues could be solved/improved through blended learning?
- What good things that we learned during the pandemic can we keep/make part of blended learning education in the future?
- What are some good examples of effective blended learning?

Our project is both practical and research-based in character. On the one hand, we want to enhance our (scientific) expertise in blended learning, in educational design and in pedagogical and didactical innovation. On the other hand, we want to use these insights to design educational interventions for courses in our programs that will make them both more effective and more motivating for students.

We have decided to start with several pilots that will be initiated by teachers themselves. To ensure it stays manageable, teachers will re-design (part of) their courses based on their topic(s) of interest. Based on our review of key literature, we delineate how various topics are situated in the landscape of blended learning (see Figure 1 below). Based on these pilots we will describe key scenarios and design patterns that can be used within other courses.

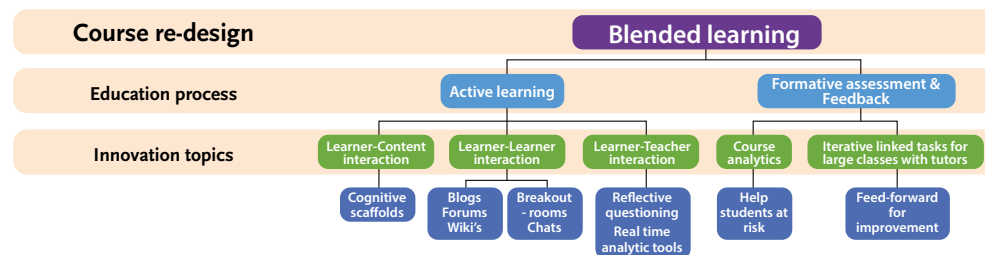


Figure 1. The landscape of possible topics for blended learning (Anderson, 2003; Garrison & Vaughan, 2008)

In doing so, from the design phase, we want to establish forms of research that measure the effectiveness of these blended learning interventions. We will use the principles of

educational design research to test our interventions while they are being designed (and redesigned). Thus, at the start of a pilot we will also describe the goals and the desired effect of the adaptation, both for students (learning outcomes) and for teachers (e.g., teacher's role, time investment). By developing theoretical and practical knowledge in this way, we want to further develop our expertise in the field of blended learning, based on which we will then be in a position to make well-founded decisions about (changes in) course design/program design.

## The Importance of Educational Support

Because we want to give all interested TSHD lecturers the opportunity to be involved in these developments, we will also offer tailored support activities for them. More specifically, we want to give them the opportunity to examine whether it is possible and desirable to make well-considered adjustments to their courses, in ways which strike a good balance and relationship between online and on-campus activities, while retaining elements that have been well-received by both instructors and students.

One thing we learned from both literature and previous initiatives is that designing effective blended learning requires lecturers to integrate content, pedagogical and technological knowledge. As we learned (also) from our colleagues at other universities, this integration can be incredibly demanding for lecturers and sometimes even overload them. Therefore, the School finds it crucial to take this complexity into account and strive to ensure that the proper support is in place to ensure the effective design of blended learning. Therefore, the first goal of the project will be to deliver scenarios and design patterns for blended learning, based on the results of carefully selected pilots. The interventions will be evidence/research-based and the effectiveness of these interventions will be investigated in a systematic/scientific manner. A second goal of the project is to set up a support system for all teachers that want to reflect upon the possibilities that blended learning has to offer for (an element of) their own specific course, with the express aim of developing more well-balanced courses. By doing so, we want to foster a culture of mutual support in which teachers, instructional designers, assessment specialists and teaching assistants can work together and make use of each other's expertise and input. This sharing of experience and expertise proved to be one of the key driving factors in successfully responding to the pandemic and continuing to run the educational programs in a responsible way.

To establish this kind of culture and the attendant support opportunities, the School has invested in, among other things, an assessment specialist, an instructional designer, an educational researcher, and teaching assistants. The intention is not that these new support professionals will develop support plans merely in their own bubble and then offer them to the School. Rather, our goal, in close consultation with individual programs, is to create a cooperative culture between teachers and these educational professionals, where they work together and make use of each other's expertise from the design phase

of a (blended) course right through to the evaluation phase of a course or program. In September 2021, we discussed with the individual programs how they would like this collaboration to be organized and identified which activities in the programs the educational professionals could be involved in. The current thought is to develop and offer customized support (for each program) as well as professionalization activities, which are based on the needs of the program in question or individual teachers. The way we plan to organize this support is largely inspired and accelerated by our experiences of offering academic education during the COVID-19 pandemic.

## Conclusion

Looking back on that Thursday afternoon in February 2020, it is evident that many things have changed in academic education. The COVID-19 pandemic forced us to rethink and redesign our entire educational program in the matter of only a few weeks. In so doing, we learned an incredible amount about both the benefits and drawbacks of digitization in education. In a sense, we were all forced to participate in an involuntary educational experiment that was incomparable to anything we had seen before. The 2021-2022 academic year will hopefully turn out to be the year in which we leave the COVID-19 pandemic behind us. Whatever course the pandemic will take, from our perspective, what is really important is that we maintain, and sustain, the culture of educational innovation that the pandemic brought along with it.

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## Student Perspective: What Should the post-Covid Classroom Look Like?

### Rick:

'Certainly not going back to the old situation. There should be a bigger focus on small-scale education as referred to in the Tilburg Educational Profile: more tutorials, group assignments, and knowledge video clips. Students should be able to find the most important knowledge in the university's online environment. Students go to the campus to work together. For certain courses, explainer sessions will be necessary, but that can be done online as well as offline.'

### Allisha:

'As regards the seminars, I would prefer in-person classes on campus, to ensure there is real interaction. For lectures, a hybrid form seems to be best. That is to say that, as a student, you can choose to go to the campus and can also opt to watch lectures online.'

### Anne:

'Not back to doing everything on campus. We have learned a lot from online classes, so why throw it all away again? There are also students who have benefited greatly from online education and are performing better as a result.'

## The Transformation of Education and COVID-19: Lessons Learned from Crisis Response

Kenny Meesters

### Introduction

The COVID-19 pandemic is viewed as a catalyst for (digital) transformation (Soto-Acosta, 2020). More specifically, some have argued that it has served as the catalyst for a more widespread implementation of online, remote and hybrid forms of teaching (Bogdandy et al., 2020; García-Peñalvo, 2021). This should come as no surprise: disruptive events are routinely hailed as both the instigator and driver of structural change. Indeed, it is commonplace in the aftermath of, among other things, natural disasters, technological emergencies, and even man-made crises, to view these events as an 'opportunity' to reflect upon, transform, and improve our prevailing systems and approaches. For example, a common phrase uttered by humanitarian organizations is to 'build back better' (Baharmand et al., 2016; Khanpour, Meesters, & Paulus, 2020). The implication here is that we should not merely restore what existed previously, but rather 'use' such emergencies to learn, strengthen and rethink our current ways of working.

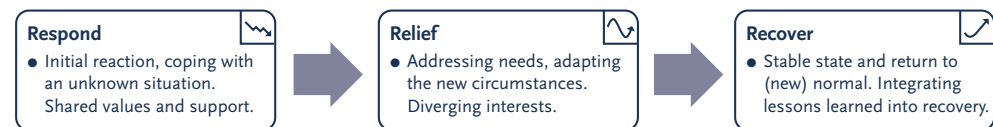
While disasters and crises situations can indeed be viewed, despite their devastating effects, as catalysts for change, most of these changes are driven out of sheer necessity, while others stem from a more opportunistic approach. However, attempting to enact a *fundamental and structural* change in the wake of such disaster has proven to be altogether more challenging. Typically, when the effect of the crisis subsides, life returns to normal, some form of stability and predictability returns, and there is a drive to 're-exert some control' over the situation. More often than not, this implies a return to existing processes and familiar structures.



Within education, the last almost two years have not only shown us that there are manifold opportunities for transforming education but also that teachers are willing and able to adjust to profound change. Moreover, structures at the university level can be molded to fully make use of the new technologies, provide leeway for innovation, and to empower the wider university community to rethink our modus operandi. However, as with most crises, the real challenge is to retain these best-practices and the lessons that were learned and use them as the basis for a more broader structural change within education, in spite of the lure of the ‘safe space’ that is the lecture hall and the fact that written on-campus exams provide educators with more control. Moreover, how do we keep the flexibility, capabilities, and motivation to deal with the future challenges that may come our way, whether these take the form of sudden global emergencies, policy changes in the educational sector, or new expectations from students?

### Transformation in Crisis

From examining past crises, researchers have identified three distinct stages in the aftermath of crises (Neal & Disasters, 1997; Van Borkulo et al., 2005). First, there is the immediate *response* stage where there is an urgent and immediate need for change. The next stage is coping with the effects of the emergency and providing *relief*, where a divergence of interests generally takes place. And finally, the *recovery* stage in which there is the potential for changes to remain in place and become structurally embedded, but organizations are also confronted with the difficulties associated with short-term goals and quick ‘recovery’.



At Tilburg University, we teachers were in the first few weeks of our ‘Management & Information Systems’ course for the Bachelor in Business Economics, when on-campus education was suddenly shut down. Coincidentally, the topic of that week’s lecture was ‘Remote working & Online Collaboration’. With the help of two members of the audiovisual support team and a student assistant, we were able to livestream the lecture from the Auditorium of the University. You can still watch the lecture online here<sup>27</sup>.

Now, nearly almost two years after that lecture, the livestreaming of classes, hybrid interactive panels, and online participation have become commonplace (van der Spoel et al., 2020). Nevertheless, there remain numerous challenges ahead as we navigate our way

through the different stages of a crisis. In the following sections, we will explore each of these stages and highlight how they manifested within our education at the Department of Management, namely within our Information Management education. On the basis of both prior lessons learned from crisis response and specific examples from our own education, we will delineate some key considerations to ensure that we maintain and enhance even the resilience that we gained over the course of this challenging period.

### First Stage: Initial Response & Drive for Change

In the initial stages immediately following an emergency or disaster, there is a strong and shared social bond (Kritzinger et al., 2021). There is a sense of shared hardship as well as clear and obvious shared goals, such as, for example, the prevention of further casualties or alleviation of suffering. In this stage, the focus is on the most fundamental needs shared by the majority of people. This is also the stage in which strong (governmental) leadership strives to get everyone to ‘rally behind the flag’ (Chapman & Reiter, 2004). Of course, we have seen this also in the COVID-19 response, where the first stages were characterized by a strongly shared belief that we needed to support our healthcare professionals and had a shared responsibility to act in accordance with the introduced measures. These conditions, in combination with changed circumstances in a crisis situation, provide a good breeding ground for new initiatives and innovation (Ramalingam et al., 2009).

COVID-19 has provided precisely such a ‘window of opportunity’ within the educational sector. For example, no longer did the size of our physical classrooms serve to limit the capacity for our courses. Teachers began to realize content could be recorded and re-used. Conversely, students discovered that content could be reviewed at their own convenience and in accordance with their own schedule. Across the university we saw the introduction of new technologies for online classes facilitated by our IT departments, the advent of new remote forms of working by our teachers, and an entrepreneurial mindset facilitated by the wider Tilburg University community.

However, it is important to stress that opportunities do not only come in the form of new tools or work forms, but also in terms of content, like new cases, contemporary topics and connections to ongoing societal challenges. An example of how such an ‘opportunity’ was explored in the Master in Information Management was the subjects that were explored in the thesis projects. The increased need for, and dependency on, information technologies touches upon many aspects of this field, including digital transformation, IT governance challenges, the digital divide and cyber security aspects.

<sup>27</sup> <https://www.youtube.com/watch?v=JUoxE1xMkCo>

Three students took an even more hands-on approach and conducted their research at the National Operational Team Corona (LOT-C)<sup>28</sup>, after their initial thesis projects were scrapped due to the COVID-19 pandemic. Their supervisor was asked to join the team as a result of his expertise as an Information Manager in international crisis response. He subsequently invited the students to join the team as well, not only to provide them with an opportunity to continue their thesis project during the pandemic, but also to provide an additional information management capacity to the team. In an interview, the students highlighted both the relevance and importance of their work and thesis projects:

"We try to provide the update in such a way that it is clear in four sheets of paper whether a serious situation is developing at a certain point or that everything is under control and there are no problems."

"The headlines of the 7:30 evening news are often things that we already heard in the corridors at LOT-C earlier that day."

In parallel with this, the scale of the obligatory move brought about different challenges that no one could have anticipated. This required flexibility and support from not only teachers and supervisors, but also from support services, management, and regulatory organs such as exam committees. However, the shared objective and sense of urgency made these changes possible during such a short time frame, which otherwise would have taken longer due to administrative, resource or audit constraints.

## Second Stage: Relief & Diversified Interests

However, as the (initial) crisis begins to feel further behind us and the situation starts to stabilize, the interests, values, and incentives also begin to become increasingly diversified. Economic incentives, for example, can be incongruous with the need for distribution of assistance (Chan et al., 2020; Daly et al., 2017). We have witnessed similar developments in relation to the COVID-19 pandemic. As the crisis dragged on, different groups in society began to express different needs and views on what was most important. For example, bars, restaurants, and even event organizers deemed it safe to open, whereas other groups were wholly opposed to 'opening up society'. In the aftermath of subsequent waves of COVID-19 infections, and spurred on by social-media bubbles, this led to increasingly intransigent attitudes. This is the stage in which political and managerial decisions have to be made that are less 'clear cut' than they were before. Different stakes, arguments and values have to be weighed against each other, while the stakeholder landscape becomes increasingly harder to navigate.

<sup>28</sup> <https://www.tilburguniversity.edu/current/news/more-news/three-students-internship-national-corona-team>

Similarly, dilemmas began to emerge in education with respect to facilitating in-person education versus remote teaching. Concerns over the well-being of pupils and students began to grow louder and the efficacy of online teaching was called into question (Tesar, 2020). Moreover, the initial excitement soon dissipated as it became evident toward the summer of 2020 that we were in this 'for the long haul'. Teachers who were initially keen to try new things and who were frontrunners in innovating new teaching forms soon realized that they had to keep these efforts up for longer, or even scale them up. Teachers who were initially reluctant to redesign their courses now realized they had no choice but to do so. The same realization occurred for management, various services within the University and last but not least: the students. There were multiple challenges pertaining to growing concerns over the quality of teaching, the well-being of staff and students, and over how to keep our 'academic community connected'.

Students of the pre-Master in Information Management, as part of the course in Academic Competences, organized a conference (<https://www.tilburguniversity.edu/current/events/tuodx-2021>) focusing on the digital transformation that came into being by virtue of the COVID-19 pandemic and attendant measures. Due to the measures that were in place at that juncture, both the course and the conference that was organized by the students were completely online. Nevertheless, various speakers from different companies shared their challenges and experiences of navigating their way through the COVID-19 pandemic and the steps they were taking to work toward their own digital transformation. This event created a highly relevant and topical link between the (academic) education of our students and the ongoing challenges in our society. As the students wrote in the course evaluation (Meesters & Wang, 2020):

"I am proud that I have been a part of the organization and I feel like I have made a valuable contribution. Even my dad and a friend from my hometown asked if they could come to the conference!"

"Overall, I think that organizing the conference was a good initiative. There is a lot to be learned when it comes to collaboration and communication between the organizing members, besides that it also created insights into how the world of theoretical research works. The fun part was that because of all the different backgrounds of the students, everyone could contribute in their own way and together we could create something valuable."

## Third Stage: Persistent Change

Once the first two stages are over, there is a return to 'normal', or, more specifically, a new normal in which society, organizations and individuals have adapted to a post-crisis world, as described by my colleagues in their book *The New Common: How the Covid-19 Pandemic is Transforming Society* (Aarts et al., 2021). While the effects of COVID-19 are still linger-

ing, a stable state will emerge in which people understand and accept the situation. This allows governments, organizations, and individuals to adopt a more structural approach to planning. However, prior events have demonstrated that it is hard to embed innovations that emerged in the earlier stages of crises into long-lasting structural changes. It often requires additional effort or investment to transform existing systems in a systemic manner, while we are simultaneously being driven to take the 'short route', and quickly revert back to old practices (Kennedy et al., 2008).

We face precisely the same challenge in education. Following a stage of experimentation and innovation and a stage of stabilization, the next question is what to keep and what to drop. It is tempting to focus only on the quick-wins and fixes that have worked well in this crisis and remove or undo changes that did not work so well. Especially when time or resources are limited, or there is a lack of energy and motivation, we tend to revert back to our old habits, structures and approaches. This was evident in the outcome of the Bootcamp introduced in the Master in Information Management.

In the Master in Information Management, three different courses (IT Governance, Cyber Security and Business Process Integration) combined forces and provided one cross-course assignment to groups of starting students in the Master in Information Management. In this Bootcamp<sup>29</sup> project, students examined the digital transformation across ten different sectors, ranging from health and medical services to the housing and real estate industry. Students produced a research paper as well as brief videos detailing the findings of their work. Furthermore, the Bootcamp was designed to both accommodate for the limited on-campus possibilities by allowing for maximum interaction with teachers and integrating with the existing course structures. It combined topical cases and theoretical knowledge with hybrid forms of teaching. Students shared the following about their Bootcamp experience:

"The neat thing about the Bootcamp was that it showed the connections between the courses we take by forming a central thread through the curriculum."

"The innovative aspects of the Bootcamp were the topicality of the themes and the fact that students looked at issues from several angles at the same time."

During this stage, the challenge is no longer to come up with new ideas, but rather to find ways to keep and structurally implement the best-practice examples that were developed during the crisis. The difficulties in doing so are highlighted by the fact that while the educators were initially happy to participate in an experiment, the various coordinators of the courses involved in the Bootcamp have since indicated that it was too time-consuming, and that resources are too limited to continue and further develop the concept.

<sup>29</sup> <https://www.tilburguniversity.edu/research/topics/new-common/boot-camp-information-management>

Consequently, they suggested that it was better to go back to individual courses and assignments.

These three stages and the examples cited illustrate the opportunities and challenges that arise when faced with a disruptive event. These examples also serve to illustrate that it is not merely the *delivery* of education (use of tools) that has undergone profound change, but rather there has also been a broader rethink of what we want our students to learn and what opportunities we have to facilitate their education. We showed new thematic areas that have emerged and how they can be linked to our education, and as such, have provided students and researchers with opportunities to utilize their knowledge and capacities for the social good. This resulted in new approaches within our programs and courses. Therefore, it is not merely about finding new tools to deliver our courses, it is also about finding new ways to provide students with relevant educational experiences, with relevant topics, and with invitations in social engagement, in ways which are in line with the [Tilburg Education Profile](#)<sup>30</sup>. Particularly during crises, it is not enough to merely adapt our educational delivery; rather, (also) the content of our education has to match and contribute to the needs of our society.

## Transformative Capacity of Education

The aforementioned lecture on remote working and virtual teams also contained a 'hybrid' [panel](#) in which different experts reflected on the new standard of working remotely and online, in addition to the implications for universities, companies, teachers and IT staff. Our director of Library and IT services made an interesting remark during this panel discussion. He mentioned that in the immediate aftermath of the introduced governmental measures, the IT/audiovisual department had to scramble to provide and scale the services needed to provide online teaching and remote working. He mentioned specifically that in the in the first days, he had to use his own personal credit-card to procure licenses.

In extant theories on resilience, many different perspectives can be found that are often applied to dealing with disruptive events (Bodin & Wiman, 2004; Coles & Buckle, 2004; Edwards, 2009). One view is to look at resilience as an *absorptive capacity*, that is, in terms of being able to withstand the impact and reduce the negative effects upon an organization. The second definition of resilience would be the ability to recover quickly from an adverse effect, that is, the so-called *adaptive capacity*. Finally, there is the *transformative capacity*: the ability to learn from disruptive events, extract the lessons learned and extrapolate these to future disruptive events. Therefore, the challenge is less about the ability to deal with a disruptive event in and of itself. After all, in the first stages following such

<sup>30</sup> <https://www.tilburguniversity.edu/about/education/tep>

an event, the motivation and willingness to adapt and innovate are high. Rather, it is the ability to keep changing more effectively in the future that is of paramount importance.

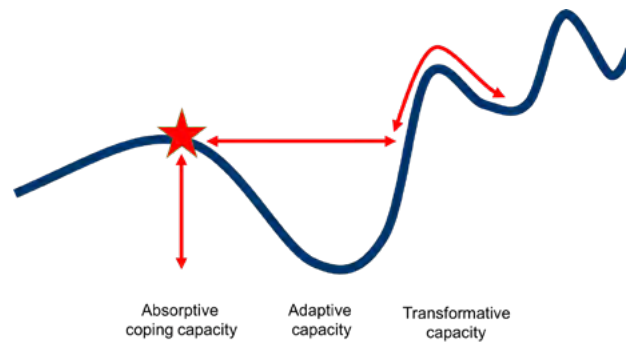


Figure 1 Resilience perspectives (Nan, Sansavini, & Safety, 2017)

The shift to online teaching in the wake of the COVID-19 pandemic involved far more than merely 'moving classes to Zoom', insofar as the entire University as well as all of its services were forced to make a fundamental change. It is tempting to see the lesson to be learned as: a) have Zoom licenses available to quickly scale online education when needed (providing an absorptive capacity), or b) provide the IT department with an emergency budget (adaptive capacity). However, a more structural solution would be to reexamine our processes and allow departments to redesign themselves to provide agility (transformative capacity). This would not only provide capacity to deal with online teaching, but also would help to create an organization that is ready to deal with future, as yet unknown, disruptive events.

## Conclusion

The challenge that remains, both with respect to the delivery of courses and in terms of making topical connections in our education, is not merely to identify specific opportunities for education emerging out of this crisis; rather, the key takeaway is to develop the ability and conditions needed to leverage these opportunities in a continuous, consistent, and structural manner. There are two closely linked key lessons to be learned from the pandemic, namely: (1) adopt a more holistic approach to think, design and implement our education in relation to a disruptive event, and (2) to carefully consider what has made our University (un)successful in dealing with these changes and to structurally leverage the opportunities for innovation.

Regarding the first point, we tend to focus on IT solutions to develop new forms of online teaching, ranging from new tools through which to create interaction during live lectures to forms of asynchronous learning (Meesters, 2021). However, we need to think about education in a more integrated manner, as outlined in our Tilburg Education Profile. As

shown through the examples cited in this chapter, disruptive events also provide an opportunity to connect our education to relevant challenges in an actively engaged manner.

Secondly, the innovations and insights that we have gained as a result of the transformation our education has undergone cannot be made sustainable without looking at the broader institutional environment. Seeing, exploring, and developing new opportunities to further improve our education is but only one aspect of this. Both the willingness and ability of our institutional environment to successfully adapt and integrate these in a structural manner is also important for ensuring that the impact and lessons that we have learned along the way will last. This requires providing the necessary facilities, resources, and managerial leeway to allow teachers, staff, and others to critically reflect on existing processes and allow these people to implement changes.

Unfortunately, there are no shortage of disruptive events looming on the horizon. The key challenge for education in general is not whether we can adapt our education to each of these new situations, but whether we can continue to enhance our ability to adapt to these new opportunities and challenges, whatever they may be and wherever they may come from.

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## III. Best Practices

# How to Create an Innovative Educational Culture at Tilburg University during Turbulent Times

**Jocelyn Manderveld & Aukje Leufkens**

Over the past almost two years, education at Tilburg University has undergone a profound transformation. From fully online education at the beginning of the pandemic, to 1.5-meter education where several components remained online while some small-scale educational activities took place on campus, to a combination of online, hybrid and small group-based education on campus. Tilburg University was confronted with manifold challenges, which, in turn, also provided the University with unique insights and opportunities.

These circumstances have necessitated strenuous efforts from our teaching staff, which the University was determined to support in every possible way. Among the many services that the University provided to support its staff, the Centre for Educational Innovation (EDUiLAB) played a particularly pivotal role.

EDUiLAB is the driving force behind educational innovation within the University, with its express mission being to help teachers to develop, implement and evaluate novel teaching methods, which, in turn, lead to effective, cutting-edge learning experiences. While the pandemic undoubtedly accelerated a pre-existing shift toward educational innovation and digitalization, EDUiLAB seized upon this momentum to initiate a movement that has transformed the practices, attitude, and vision of what was formerly a rather traditional University.

Over the course of the last year, EDUiLAB has experimented hand-in-hand with teachers, offering tailor-made material, individual consultations, scalable training, and micro credential programs for students, to name only a few of their initiatives. This, in turn, has allowed EDUiLAB to collect data on multiple enriching learning experiences as well as generate some key take-away messages. Specifically, we found that COVID-19 offered a unique opportunity to place an experimental approach at the forefront of our ongoing efforts to establish an innovative educational culture. On the basis of our experience, we have formulated three core conditions which are necessary to sustain educational innovation:

1. Organizing a combination of top-down and bottom-up educational innovation activities
2. Providing teachers with sufficient support
3. Ensuring knowledge sharing and community building

In this chapter, we would like to demonstrate how we at EDUiLAB initially reacted to and subsequently proactively responded to the consequences of the COVID-19 pandemic by creating a sustainable wave of change and innovation geared toward enhancing the resilience of our University amid this turbulent period.

## Experimenting

Inspired by the concept of structural ambidexterity (the state of being equally adept in the use of both left and right appendages, such as one's hands), EDUiLAB was established as an independent entity that comprised an interdisciplinary team. Driven by a desire to explore and develop educational solutions by thinking outside the box, the team allowed our staff to thrive in their teaching despite the difficult circumstances. Moreover, it became apparent that if we were to foster an innovative educational culture at Tilburg University, then we needed to invest in a research-based approach to educational innovation. With this in mind, EDUiLAB's team systematically analyzed the fundamental requirements for implementing high-quality, student-centered, online, hybrid and blended learning, from a comprehensive pedagogical, didactical and technological perspective.

An important starting point in this process is the Tilburg Educational Profile (TEP). The TEP consists of four characteristics that serve as the basis for designing each study program at Tilburg University<sup>31</sup>:

- Exploring: Tilburg education is academic in nature and inquiry-oriented
- Connecting: Tilburg education is socially and internationally oriented
- Engaging: Tilburg education is small-scale and involving
- Activating: Tilburg education is interactive and diversified

<sup>31</sup> The Tilburg Educational Profile, March 2015, Action team (chair: Alkeline van Lenning) [https://www.tilburguniversity.edu/sites/default/files/download/Tilburg\\_Education\\_Profile\\_\(English\\_version\)\\_150323.pdf](https://www.tilburguniversity.edu/sites/default/files/download/Tilburg_Education_Profile_(English_version)_150323.pdf)

These principles are concisely summarized in the terms Knowledge, Skills and Character<sup>32</sup>. Both current students and alumni of Tilburg University stand out from students from other universities because of the attention paid to 'character building' during students' studies. The consequence of this is that students are well-equipped to further develop their talents, enhance their knowledge, and contribute to society.

All the activities at EDUiLAB should contribute toward enriching the TEP as well as the learning environment for Tilburg University students, both online and on campus.

But how do you ensure that an innovative culture is created? And how can you ensure that teachers both invest the necessary time and effort to innovate and are open to educational innovation?

When EDUiLAB started in 2018, there was no real educational innovation culture within Tilburg University. Although small-scale educational innovation projects were running within different schools, and several teachers were experimenting with innovative forms of teaching, the University was primarily known for its excellent small-scale education on campus, where lecturers both design and implement the education together with program directors. Notwithstanding these initiatives, there was no indication of structural educational innovation within Tilburg University at that juncture. Therefore, in the first few years, EDUiLAB built on pre-existing projects carried out within the faculties. For example, a collaboration room was set up on campus where lecturers could experiment with new teaching forms. Alongside this, a pilot was carried out that involved issuing digital certificates, which are also known as EDUbadges. These are primarily local initiatives within the individual schools, which were not really known to other schools.

However, everything changed in March 2020 as a result of the COVID-19 pandemic and attendant measures. Tilburg University's education underwent a profound transformation, in part due to the shift to online teaching, which required instructors to utilize a wider variety of learning goals, learning activities, and work formats. Indeed, on several occasions, lecturers were forced to redesign their courses and assessments as they went along in order to keep up with the continually evolving circumstances. This situation demanded considerable effort from our teaching staff who were forced to adapt to a new educational situation in an incredibly short space of time. In light of this, it became vitally important that the University provides the necessary conditions for a more structural and sustainable form of educational innovation to take place.

This is precisely where EDUiLAB came into the fold. EDUiLAB together with the schools provided the necessary conditions to initiate a more sustainable innovative turn within Tilburg University's education. What specific activities did we undertake?

<sup>32</sup> Knowledge, Skills, Character: Educational Vision Statement Tilburg University, 20 January 2017 [https://www.tilburguniversity.edu/sites/default/files/download/ENG-27-6-2017\\_Knowledge\\_Skills\\_Character\\_Vision\\_DEF.pdf](https://www.tilburguniversity.edu/sites/default/files/download/ENG-27-6-2017_Knowledge_Skills_Character_Vision_DEF.pdf)



First, it is important to recognize that there are a number of important conditions and core values required to achieve educational innovation: <sup>33</sup>

### 1. *Organizing a mixture of top-down and bottom-up educational innovation activities*

A bottom-up approach begins with the teacher. The advantage of this approach is that educational innovation arises out of teachers' own enthusiasm and corresponds to their priorities.

A top-down approach begins with making agreements with the educational programs. This top-down approach has the advantage of creating movement more quickly and, therefore, allowing you to take the next step sooner. Setting up a support infrastructure is easier if you are assured that almost everyone will use it.

Within EDUiLAB, a mixture of top-down and bottom-up activities were utilized in order to combine the respective strengths of both strategies. During the summer of 2020, the 'Innovate your education' initiative was launched. This initiative allows teachers to attain a grant by writing a proposal about how they would like to innovate within their education. This initiative is a combination of a top-down and bottom-up approach. The program and finances were arranged at the central University level (top-down), while the initiatives come from teachers themselves (bottom-up). Thus far, 13 proposals have been accepted across the five different schools at Tilburg University. The proposals are incredibly diverse, as evidenced by the examples below which describe some of the topics in more detail:

- a. Educational podcasts and manual: in this project the lecturers sought to make the connection between theory and practice more visible and chose to use auditory learning by making educational podcasts. The results of this project were five educational podcasts and a manual for other teachers to create educational podcasts. The students and teachers positively evaluated the educational podcasts. The next step for the teachers is to look into how these recorded podcasts can be used for other courses as well as what steps need to be taken for their upcoming course.
- b. A blended learning toolkit: due to the high number of students in the Psychology program, the academic director wants to shift from traditional learning to in-depth learning opportunities via blended learning. The participants want to sustain the changes that were made during the COVID-19 pandemic and, in this respect, the blended learning toolkit should further improve the program. They developed a blended learning toolkit and used this toolkit to design and implement a blended learning approach in two courses during the first semester of the 2021-2022 academic year. After these courses finish, the toolkit will be evaluated, and the results will be used as the basis for an implementation plan for the whole program.
- c. Turn a Philosophy of Science course into the first Tilburg University Massive Online

Open Course (MOOC): in order to both provide the opportunity for self-development to everyone and use knowledge to advance society, the applicants aspired to turn a Philosophy of Science course into a MOOC. The course was digitized during the COVID-19 pandemic and therefore is available online. During this project, the lecturers hope to gain more insight into how to create a MOOC that is available to everyone for free.

The pandemic encouraged teachers to be innovative and the 'Innovate your education' activities proved to be an additional incentive to embed these creative ideas within future education.

One top-down project carried out by EDUiLAB is hybrid teaching. Within the University, it was agreed that hybrid teaching should be supported. EDUiLAB created a support line together with experienced colleagues from all the schools. This support includes webinars, individual support and try-out sessions. While EDUiLAB can both provide the requisite knowledge and help with the practicalities associated with hybrid teaching, the experiences of the teachers from the schools are absolutely essential. Teachers are more likely to get behind the movement when their peers share their positive experiences.

### 2. *Providing teacher support*

Teachers in higher education recognize that educational innovation and the use of technology offers manifold new opportunities for teaching. The problem is that although they see technology as an effective means through which to provide high-quality education, they lack the time needed to get to grips with it. Consequently, universities committed to educational innovation must therefore provide teachers with the necessary time and support wherever they can. This means that institutions must invest in excellent supervision and good facilities, not to mention taking work off teachers' hands where possible. Well-organized lecturer support and professionalization are extremely important factors for successful educational innovation as well as for ensuring good quality online and on-campus education and assessments.

A Teacher Desk was created at Tilburg University for the express purpose of providing teachers with support. As a result of the COVID-19 pandemic, teachers quickly had to shift to online education, which involved a lot of questions regarding the new forms of education (online, blended, hybrid). The Teacher Desk helps to resolve all different types of questions about online, blended and hybrid teaching. Moreover, the Teacher Desk delivers support by providing try-out hybrid sessions on campus, co-hosting online sessions or helping in DIY studios. This support is greatly appreciated by teachers and continues to be requested by them.

The issues raised at the Teacher Desk shed light on the fact that the problems were often multi-disciplinary in nature and related to several disciplines, such as AV and didactics. Therefore, multi-disciplinary teams are important for solving these issues quickly.

<sup>33</sup> <https://www.surf.nl/files/2020-07/keuzehulp-ondersteunen-van-onderwijsinnovatie-met-ict.pdf>

### 3. Ensuring knowledge sharing and community building

A good support infrastructure is not sufficient in and of itself. First of all, lecturers need to know that the University encourages educational innovation. They also need information about where they can go if they wish to innovate within their teaching, and what the benefits of doing so would be, how much time it will take, and how they will be supported in this endeavor. For this reason, communication and knowledge sharing are of paramount importance for supporting teachers.

Another important element is the formation of communities within an institution of teachers who are engaged in educational innovation. These communities allow teachers to exchange knowledge with one another, as opposed to having to reinvent the wheel time and time again. EDUiLAB is the lynchpin between the schools, insofar as it aims to disseminate the knowledge gained within each school. Furthermore, several activities have been organized to foster this sense of community and inspire teachers, such as, for example, teaching meetings, webinars and innovation days. These teaching meetings are organized according to the principle of for teachers by teachers, and involves teachers sharing their experiences of education.

## Lessons learned

Who would have thought beforehand that an event like the COVID-19 pandemic would prove to be such a great driver of educational innovation? Everything gained momentum in the wake of the pandemic and the attendant governmental measures. Never before have teachers been forced to offer so many different forms of education, with the rules of the game continually changing as a result of the evolving COVID-19 rules and regulations. This demands considerable effort, both from a teachers' perspective and in terms of the support that is required from the organization.

On the other hand, we have also seen that teachers are more interested in working on educational innovation at this juncture, and, moreover, that there is now genuine momentum behind creating a stronger Innovative Educational (Research) Culture<sup>34</sup> at Tilburg University. The ambition is to realize an innovative culture in which experimentation is allowed on a small scale as well as combining various trends and developments that we are witnessing in education (e.g., flexibilization, open science, learning analytics, new tooling). As a research institute, Tilburg University has a responsibility to carefully monitor the follow-up effects of educational innovations by improving and stimulating research in and about education (e.g., learning analytics, educational design research, and other forms of innovative educational research). Besides research on education, there has to also be a place for experimentation and space for lecturers to both integrate the new didactic meth-

<sup>34</sup> Tilburg University Education in 2021/2022 and beyond, April 2021 <https://www.tilburguniversity.edu/nl/intranet/meer-nieuws/ambitie-tilburg-university-op-weg-naar-blended-onderwijs-goedgekeurd>

ods and tools within their courses and to share educational experiences with each other. It is also important to more explicitly encourage and support the application of grants for educational (research) projects, by, among other things, incentivizing policies.

This ambition will be incorporated into the new strategic plan of Tilburg University (2022-2027), where Tilburg University provides a flexible, innovative organization and an educational culture in which there is ample room for experimentation on a small scale, alongside combining trends and developments. Tilburg University improves and stimulates research both in and about education, in order to carefully monitor the follow-up effects of educational innovations.<sup>35</sup>

The turbulence caused by COVID-19 created the opportunity to foster an environment conducive to experimentation and change within education. The conditions that are vital for sustaining educational innovation are: 1) a mixture of bottom-up and top-down educational innovation activities; 2) providing teaching support; 3) ensuring knowledge sharing and community building. The upcoming challenge is to hold on to these changes, while, simultaneously, expanding the educational innovation culture at Tilburg University.

<sup>35</sup> <https://www.tilburguniversity.edu/nl/over/bestuur-en-beleid/strategisch-plan/2027/gesprek/beraadstafels/onderwijs>

# Student Perspective: How Did You Experience Online Education?

## Allisha:

'I noted that it offered many new opportunities. It made life easier in a way, because it allowed you to be more flexible about how you scheduled your day. But there were downsides, of course. I felt less committed to my studies. I noticed it made me lazy and less motivated, resulting in more stress before exams.'

## Anne:

'I was quite pleased that it was all up and running reasonably quickly. Videos were soon posted online and we could watch lectures online almost immediately. But the longer it all lasted, the more trouble I had to actually watch those lectures. I stopped almost entirely, especially when there weren't any lectures with mandatory attendance any more. It may have worked a dream for other students – they can decide when they watch the lecture – but it didn't work for me. I stopped watching altogether. I need that big stick of going to in-person lectures. Studying became harder for me as a result. I did pass my exams, but my grades were so-so. Had the classes been in person, I would have had a better understanding of the subject matter, also in the long term. This time, I started cramming one week before the exams, but then the knowledge doesn't stick very well.'

## Jamie:

'Although it was a bit awkward in the beginning, it soon got better. Amazing how quickly you get used to a new situation. But I found it very difficult to maintain the discipline to watch the lectures all the time, especially when everything is being recorded. If you are busy watching a Netflix series, it's pretty tempting to finish that first and watch the lecture later. I was procrastinating more and more. You can only solve this by going to the campus with your fellow students. You are active as one of your peer group and you help each other get through. Studying together is almost even more important than whether or not you watch online classes. Gathering knowledge is only one aspect of studying. Peer pressure, peer review, sparring with fellow students, that's equally important.'

## Old Languages, New Teaching

A Brief Overview of the Challenges Associated with Teaching Biblical Languages Online

Piet J. van Midden, Dries De Crom & Arnold Smeets

The Bachelor's program in Theology at Tilburg University requires all students to master the basics of three biblical languages, Hebrew, Greek and Latin, in order for them to be able to consult the source texts within the Judaeo-Christian tradition. In these language courses, the focus is not on linguistic knowledge *per se*, but rather on developing one's reading comprehension and interpretation of texts.

Over the past decade, Tilburg School of Theology (TST) has been breaking new ground in terms of teaching biblical languages online, primarily through the development of a post-initial *Biblical Hebrew Online* (BHO) program. This program is offered and coordinated by LUCE, the School's center for religious communication and post-initial education. In the spring of 2020, the onset of the COVID-19 pandemic necessitated an almost instantaneous shift to online education across the entire university. In this respect, the existing BHO program served as a clear template of how to successfully implement a course online and provide asynchronous teaching in the field of biblical languages, and, as such, quickly became a model for adapting the existing language courses in the regular program to fit the new situation.

This chapter reflects on the development of the post-initial BHO program as well as examining how this program inspired the shift to online language teaching in the regular Bachelor's program in Theology. Our principal focus is on the experiences of the teachers involved: how did the shift to online education affect the teacher's role, both in a fully online and asynchronous setting (BHO) and in a blended format (BA Theology)? It will be argued that online teaching is possible, that it provides manifold opportunities for good teaching practices, and that it does not undermine the essence of what constitutes "good education".

## Background to the Development of BHO

The post-initial BHO program was developed toward the beginning of the last decade. A careful re-reading of hand-written teacher's notes in the syllabi over a ten-year period showed that the same questions were asked *de facto* every single year. The video facilities of Tilburg University, which at that juncture were relatively new and hardly discovered, made it possible to answer these recurrent questions once and for all in 30 videos of no more than ten minutes each (most were much shorter).<sup>36</sup> This material was made available to all students. In this way, students who wished for more than the in-class explanation could watch the clips to study the grammar of Biblical Hebrew, while it afforded the teacher the opportunity to delve deeper into questions and grammatical problems which could not be addressed during the lectures. The results were better than anyone could have hoped for, as the students scored much higher on tests than previous cohorts.

This opened up possibilities for a didactic method in which grammar was not so much the goal of learning Hebrew, but rather a means to learn the language through reading.

The new approach also made it possible to reach out to a new audience of students: those who wanted to update their skills through professional education, or those who wanted to learn Hebrew out of an interest in languages or the Bible. Particularly with these students in mind, the hybrid content was subsequently transformed into a fully online course, complete with a revised edition of the workbook, focused on learning Hebrew by reading Hebrew.<sup>37</sup> This course, comprising three modules of 3 ECTS credits each, was made available by LUCE, the TST center for religious communication and post-initial education. The three modules have the same learning goals as the regular courses of Hebrew in the Bachelor's program.<sup>38</sup>

In 2015, the BHO program was awarded Tilburg University's *Teaching Innovation Award*.

## Didactics and Teaching

The aim of learning Hebrew (and Greek and Latin) is reading skills.<sup>39</sup> Yet, this was not always commonly accepted. In the past, the emphasis was primarily on recognition of the

<sup>36</sup> Another pioneer during this period was dr. Bob van den Brand (Tilburg School of Economics and Management). The present courses of BHO would also not have been possible without the IT-related support of drs. Nico de Groot (Tilburg School of Theology).

<sup>37</sup> See van Midden (2011; 102018) and the revised edition: van Midden (2019).

<sup>38</sup> Apart from the development of reading skills, the first module addresses orthography, phonetics, morphology of the noun, while the second module focuses on the morphology of the verb. The third module contains reading exercises in prose texts, but also reading exercises in prophetic and poetic literature. Since 2014, some 90-plus students have taken one or more modules of BHO. Currently (July 2021), some 35 students are involved in the program. The BHO program is also frequently cited as one of the reasons why students choose to study theology at TST.

<sup>39</sup> Cf. Knauf (2014) and Adema (2017).

verbal forms. However, it makes little sense to delve into the conjugation of verbs if this does not also help one's reading skills. Besides this, Biblical Hebrew is a dead language. Students can only learn to read it—and translate it. For that type of learning, grammar is simply a means to an end.

In the context of Biblical Hebrew, "reading" also means "reading aloud". This is because the text of the Hebrew Bible did not originally have written vowels: the written text is purely consonantal, and the vowels were meant to be added during the recitation of the text. In other words, you have to read out loud to determine the meaning of the text. Thus, "simple" reading comprehension already provides a first, and incredibly important, form of text comprehension.

Even in modern written Hebrew, Ivrit, only consonants are used, albeit some consonants are used to indicate the presence of a vowel. For example, to the right is the word "kiosk". One reads from right to left. The first letter is a Q. The second is a Y, which can be used as a vowel and a consonant just like in English. The third letter is a W, which can also be used as an O; the fourth is an S and the final letter is a Q again.



In the BHO program, Canvas is the medium of choice. All learning materials are available there. Assignments are checked and commented on by the teacher as soon as possible using the Canvas Speed Grader. Here, too, the focus is on reading and reading again. Read texts in .mp3 or .mp4 format are also submitted via Canvas. These exercises are then discussed with the student online, either by email or during a meeting or a video call. These modes of communication make learning personal. They can be used to both motivate students and provide them with additional information.

Here, too, the role of the teacher is active and pro-active, in precisely the same way that it would be during in-class or hybrid teaching. The teacher is also able to monitor, interpret and stimulate students' progress from a distance.

So, exploring reading skills is one of the first goals a teacher should set. The best motivation a teacher can offer is the pleasure he/she takes in their subject.<sup>40</sup> However, the course ends with Hebrew 3. How to monitor and preserve reading skills afterwards? One does not learn Hebrew for the language itself or to speak the language in its modern version, but rather to be able to understand the biblical text properly. However, the number of texts that can be offered in the lectures is extremely limited. There is a tremendous risk that what has been learned will fade, simply due to a lack of practice.

<sup>40</sup> Cf. van Midden (1995).

It is for this precise reason that the *Ephemerides* were created: these are a series of daily videos of (again) a maximum of ten minutes.<sup>41</sup> Each *Ephemerid* contains a biblical text which is read, translated, and briefly explained.<sup>42</sup> The series now has an audience of 1920 interested people (“followers” is not the correct term) and 1250 videos have been published. They are freely accessible and are registered according to the text discussed<sup>43</sup> and its date of publication.<sup>44</sup> The number of participants remains relatively stable. The *Ephemerides* have thus created a hitherto unknown circle of people that are interested in Biblical Hebrew.

## Back to the Present

To be clear, in the spring of 2020, it was never a question of merely copying the BHO program into the regular Bachelor’s program. The established courses include weekly seminars, unlike the BHO program which is designed for self-study. Furthermore, the sequential nature of the Bachelor’s program places more pressure on students to complete the language courses within a fixed period of time.

Notwithstanding these differences, prior experience of online language teaching within TST undoubtedly pointed the way forward. Broadly speaking, it was decided to adapt the existing courses in three ways: firstly, by including more asynchronous teaching, that is, by introducing new content in the form of knowledge clips and instructional videos; secondly, by opening up more in-class time to address students’ questions; and finally, by giving students greater autonomy over the organization of their own work within the limits of a single course.

Of course, the degree of autonomy and responsibility varies across both the student population and the specific course. However, generally speaking, for first-year students, classes are more teacher-driven, with well-defined learning tasks and closely monitored student activity. The degree of autonomy then gradually increases in second and third-year courses, to the point where the content of classes is determined almost entirely by student input, that is, the questions they raise and the problems they have encountered.

As an added benefit, there is now significantly more time for differentiation in the TST language courses.<sup>45</sup> It is a well-known fact that, among any given student population, there will be differences in ability, previous attainment, and learning styles. The increased use of asynchronous teaching and the opening up of class time to student input thus allows for

<sup>41</sup> The motto of the *Ephemerides* is *Nulla dies sine linea Hebraica*, “Not a day without a line of Hebrew”, a statement which is attributed to Franz Rosenzweig.

<sup>42</sup> Knauf (1994).

<sup>43</sup> See [tiu.nu/register-efemeriden](https://tiu.nu/register-efemeriden) (accessed July 2021).

<sup>44</sup> See <https://tiu.nu/efemeriden> (accessed July 2021).

<sup>45</sup> Muijs & Reynolds (2018), 220-232 has been particularly inspirational here.

easier differentiation between students, for example, in terms of method (individualized vs. whole class learning), working pace, amount of teacher support, difficulty of assignments, and so on. Especially in the second- and third-year courses, it is now no longer the norm that students are all working on the same course content at the same time.

How does this affect the role of the teacher? The shift to largely asynchronous, online teaching requires the teacher to re-focus on the things that truly matter in good education.

Firstly, the teacher must formulate clear goals for the students to achieve, not only for the course as a whole but also for each separate module. Next, it is the teacher’s job to provide clear and expert instruction to students. While in the case of asynchronous learning, this will often take the form of knowledge clips or instructional videos, the exposition of a specific point in response to a student’s question during (online) classes is of equal importance in this regard. Thirdly, the teacher has to design learning tasks that challenge students to both work actively on achieving the learning goals and apply the knowledge they have gained within new contexts. Finally, and perhaps most crucially, the teacher needs to provide each student with feedback on their performance.

It should be noted here that these “teacher tasks” do not differ substantially from traditional in-class teaching. This testifies to the fact that the essence of good education is not undermined by a shift to online teaching: even within a new educational format, teachers need to focus on those things they know work best. It is no surprise, then, that the same essential teacher tasks routinely pop up in research on “what really works” in education.<sup>46</sup>

## A Student’s Perspective

And what do students make of these changes? Judging from the student evaluations from two semesters’ worth of courses, students have had positive experiences with the largely online language courses. As a result of the change to a more “blended” course format, more in-class time than ever is being devoted to the reading and interpretation of texts—which is the ultimate goal of our biblical language courses. Compared to the pre-Covid situation, the amount of textual material read and discussed during class has roughly increased by half. Thus, students are actually getting more opportunities than ever before to develop their reading comprehension skills in complex situations. The net result on student progress cannot be anything other than positive.

Of course, the changes made to the existing courses have also brought new challenges. One point that warrants attention is how to maintain a healthy group dynamic when students are no longer necessarily working on the same task at the same time. The teacher

<sup>46</sup> For example, they figure prominently in the influential meta-analyses of effective teaching methods by John Hattie and Robert Marzano; see, e.g., Killian (17 June 2015) and the literature referenced there.

can anticipate this issue by regularly providing opportunities for group discussion and cooperation on specific learning activities. A second challenge pertains to monitoring the teacher's workload. The amount of individual feedback can be especially time-consuming. Here, it is possible to partially offset this problem by turning to online quizzes with automated feedback, at least for the most basic learning activities.

## Conclusion

Online teaching is here to stay. Not as a goal necessarily, but rather as a means to an end: good education. The teaching experiences in both the post-initial BHO program and the recent Covid-related online education illustrate the various possibilities and benefits. The role of the teacher remains just as important as it is in in-class and on-campus education. Hence, it is necessary to develop a didactic method in which online education is used as a tool, in such a way that it enhances and enriches the learning process of individual students. As long as teachers keep this point at the forefront of their mind, the actual learning context—whether it be a completely online self-study packet, a hybrid form or a 100% on-campus and in-class course—is (more or less) secondary.

Language education in post-pandemic on-campus (theological) education will continue to profit from prior experiences. The educational experiences during the COVID-19 pandemic remain helpful for updating the post-initial BHO program, and, indeed, plans are being made to develop a full post-initial program for Greek and Latin as well.

*Summa summarum*: Digitization has not made physical language education redundant, but it has made it much more accessible.

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## Student Perspective: What Did you Miss Most?

### Rick:

'Working together on campus. It's easier to discuss things, share knowledge. That works much better than communicating via WhatsApp, which we did a lot, incidentally. It is easier to challenge and motivate each other.'

### Milan:

'I think the social interaction mainly. There is more of a threshold, asking questions online. For me personally the effect was that I had more difficulty keeping focused. You are much more likely to be distracted. That was one of my main problems.'

## “This is Fun!”: Using Gather to Enable Experiential Learning When Teaching Online

Hans van Dijk & Stefan Cloudt

### The Dilemma

The sudden shift to online education in the wake of the COVID-19 pandemic forced all academics to change their way of teaching. Challenging as that situation undoubtedly was, those of us who work in the social sciences found this transition somewhat less difficult than other colleagues, for the simple reason that most of our teaching is theoretical in nature, does not involve physical activity, and, hence, requires neither ourselves nor our students to be physically present.

However, for our course Organizational Dynamics, which forms part of the Master in Organization Studies at the Tilburg School of Social and Behavioral Sciences, such physical presence is required. This is because Organizational Dynamics is designed based on the principles of *experiential learning*, which posits that learning is more effective when it is connected with (reflecting on) experience (Kolb, 1984). With this in mind, on this course we begin our classes by providing students with a very particular experience, namely by playing so-called *serious games*, which aim to simulate real-world situations and phenomena. By playing such a serious game, students experience what it is like to be in a specific situation and can playfully experiment with what types of decisions and behaviors result in what kinds of emotions, feelings, and outcomes. Students subsequently reflect upon their experiences, and, more specifically, the dynamics (i.e., causes and consequences) of both their own and other people's behavior. After having reflected upon the practical experience, students then engage in a theoretical reflection aimed at

understanding how the dynamics observed and experienced in the serious game relate to scientific theories and insights pertaining to the situation and phenomenon simulated in the serious game. A meta-analysis of 89 studies in experiential learning involving both treatment and control groups indicates that connecting theory to such practical experiences in this way enhances the likelihood of theoretical knowledge being gained and retained (Burch et al., 2019).

The central elements of the Organizational Dynamics course are five workshops, which are focused on different topics and involve students playing a serious game. For example, in a workshop on organizational change, students play The Change Game, where all students have to hand in one euro. Two-thirds of the students receive a number at random. They represent employees, and are told that they will get their euro back if they stay in their seat throughout the game, which lasts for 45 minutes. The remaining one-third of the students are the managers, and are told that they will receive the full sum of money if they are able to reseat the employees in the order of their employee numbers. Through participating in this game, students gain first-hand experience of the thoughts, feelings, and emotions involved in either having to motivate employees to change, or being subjected to efforts from managers to make them change whilst being incentivized not to change. Although the students (are supposed to) have read theories on how to motivate employees to change their behavior prior to the session, in nearly all cases, students do not use or follow those theories in the game. Rather, they rely on their intuition, which often results in failing to change the behavior of the students within the allotted time. This game enables us to make them cognizant of the fact that there is little use in having a Master's degree if they do not *use* the knowledge and insights gained throughout their university education in practice.

All five serious games revolve around simulating interactions and dynamics within organizations, between organizations, and with their surrounding environments. The games focus on topics like collaboration, competition, resistance to change, leadership, and inequalities. Students frequently and vividly interact, move, discuss, and exchange information and resources. Such decentralized and uncoordinated interactions and dynamics cannot easily be mimicked in Canvas or Zoom. Therefore, the shift to online education presented us with the question of how we should redesign the course: Did we want to abandon the experiential learning principles of the course, or try to find ways to make experiential learning possible in a digital environment? The former would require a profound shift in terms of both what and how we would teach and may even require us to adjust some of the learning goals. However, it provided us with the assurance that we would come up with a course design that we could definitely work with. In contrast, if we pursue the latter option and seek to find ways to engage in experiential learning in an online environment, then we would at least stay true to our teaching philosophy and approach, but it would be highly uncertain if the investments would result in a workable and effective solution.

## Gather

Because we strongly believe in learning retention among students by means of experiencing theory and, as such, wanted to keep our learning goals intact, ultimately we opted to find ways to retain our experiential learning approach. In our quest to do precisely this, we stumbled upon Gather, a digital platform that combines video-calling with a 2D map in which each person controls an avatar with which they can walk around<sup>47</sup>. When they come close enough to another person's avatar, the video of that person then pops up and they are able to have a video chat.

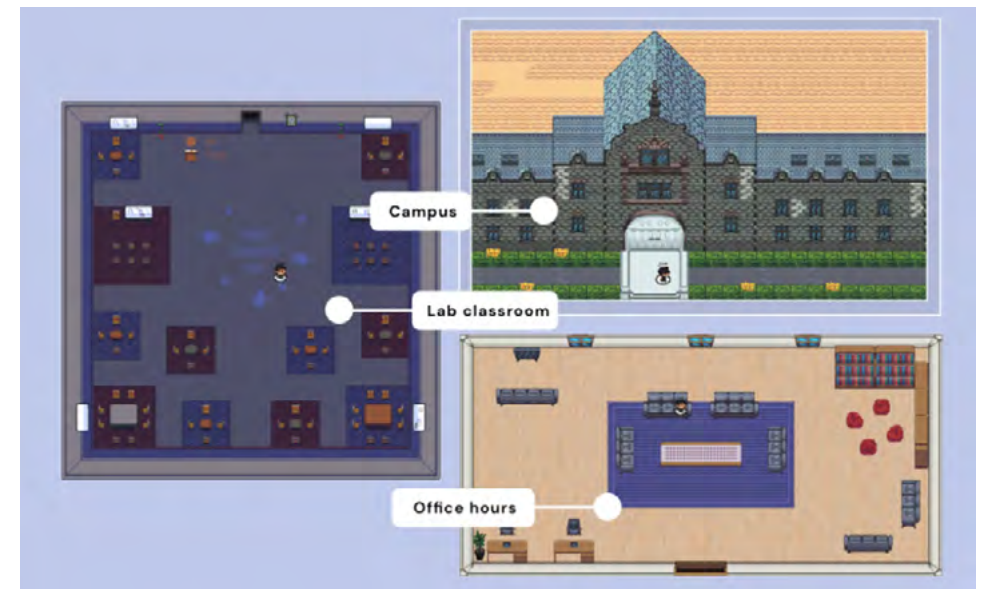


Figure 1. Different map options in Gather (Xavier University, 2021)

Gather thus offers an online environment that mimics real-life interactions, insofar as it lets people walk around in a digital environment and see and talk to people in their vicinity without hearing other people further away, or them (over)hearing you. It also offers a number of different maps (see Figure 1) as well as the possibility to create and design maps, which means you can create a lay-out to suits a session's needs. This feature was highly expedient, given that the different serious games in our course revolve around different contexts, while the variety of the maps enabled us to select or create a digital context that fitted the topics of the serious games.

Viewed together, Gather appeared to provide exactly what we were looking for. We first tried it out ourselves, and immediately noticed that the basic use of Gather was very intuitive. According to the Technology Acceptance Model (TAM) (Davis, 1989; Lee et al., 2003), per-

<sup>47</sup> see <https://gather.town/about>



ceived ease of use is one of the two main determinants of whether a new technology will be adopted (with the other being perceived effectiveness), so the fact that Gather was so intuitive to use was very important to us. In terms of (perceived) effectiveness, alongside mimicking real life interactions, Gather also offers some nice features for presentations (e.g., the ability to let everyone in the room see and hear a presenter, slide sharing, document sharing, whiteboards, embedded Zoom calls), which made us want to use it on our course.

The use of Gather is free for groups of up to 25 persons, above which you need to pay a fee. Because our workgroups have approximately 30 students, we contacted the developers of Gather to ask how much it would cost to use it in four workgroups with approximately 30 students for a two-month period, which turned out to be around €500. We requested funds from our department, and once these were granted, we started to adjust our course to incorporate the use of Gather, while, simultaneously, allowing for the use of other platforms like Zoom as well.

## Adjusting the Course

After determining that we would use Gather on our course, the next step involved going over each of the five serious games we had previously used to assess if they were fit—or could be fitted—to be played via this platform. One important design element of our course is that each workshop is facilitated by a different team of students, that is, we provide student teams with the topic, readings, and serious game for their workshop, but as facilitators, they have leeway to make adjustments as they see fit. In flipping the classroom in this way, students also gain experience in facilitating a serious game, which is similar to what many of our alumni would later do as trainers or consultants. So, the fact that students would have to prepare and run the serious game entailed that we needed to be sure that they could feasibly run each game via Gather, or whether there needed to be some kind of alternative.

We as supervisors engaged in in-depth thought experiments to discuss how each game could be run online via Gather and agreed that for three of the five serious games (including The Change Game), minimal adjustments were required to run the serious game via Gather or via Zoom. For the other two serious games, we split the workload between us to either find a suitable alternative serious game, or to adjust the game in such a way that it would work well. For one serious game, we found an alternative serious game focused on the same topic that also included a description of how to run the serious game via Zoom. We adjusted the other serious game in such a way that we deemed it could be run well via Gather.

We employed two approaches to entice students to use Gather. First, we announced that we would use the platform for at least some of the games, and thus highly recommended that they already try it out. Second, each team of students participated in a separate preparation session during which we explained what serious game they would facilitate, before then providing them with instructions and suggestions as to how to do that. During that session, we added specific suggestions regarding how to facilitate the serious game via Gather. Howev-

er, in appreciation of the fact that facilitating a serious game is already a novel experience for students and, as such, that some may consider doing this via an unfamiliar digital platform as a step too far, we also indicated that they could opt to use Zoom if they so wished.

## Experiences

Below, we share our experiences of using Gather, which are based on both our own personal observations and the reflection reports that students had to submit after each workshop. Overall, our experience with Gather is based on 20 serious games workshops in the fall of 2020, of which approximately half took place on this platform. These experiences are provided in no particular order.

First, students reacted very positively to the use of Gather on the course. Having already experienced half a year of online teaching at that point, they very much welcomed the different learning experience that this platform offered. We noticed this based on how the facilitating teams behaved and responded in the preparation sessions as well as during the workshops. For example, during the first workshop we heard students indicate their excitement by exclaiming “*This is fun!*”. Overall, Gather provided a more playful and fun learning experience for students. Even though each workshop can last up to four hours with usually only one break during it, we personally did not feel as tired or exhausted afterwards as we sometimes do after a regular two-hour online lecture or workgroup, and we got the impression that students felt the same. In fact, in the evaluation, one student indicated: “*I really want to thank the teachers for the very nice workshops, the pleasant learning environment you created and the new but very pleasant and educational way of learning that I have experienced during this course. I really think this form of education has a lot of potential for being used more for other courses!*”.

Second, the behaviors, interactions, and dynamics that we observed in Gather were relatively similar to those that we observed in prior years. For example, in the Change Game mentioned above, we noticed that managers tended to rely on their intuition as opposed to theory, and showed a general bias toward action rather than deliberation. Moreover, employees tended to assume the role of a passive recipient and did not even consider thinking about a joint strategy beforehand. Furthermore, the dynamics between the managers and employees tended to be characterized by us-versus-them attitudes and behaviors, which, in turn, inhibited managers’ ability to successfully change the employees’ behavior in time. All the tendencies, behaviors, and dynamics that we observed online are similar to what we witnessed in prior years when we played this serious game on campus. The only difference that we experienced was a slight reduction in intensity: dynamics were similar but less extreme, which probably stems from the fact that the experience was remote and therefore less intense for the students themselves. However, overall, given the similarity of the experiences, we believe that Gather enabled us to uphold the teaching philosophy of the course. One student corroborated this belief by indicating in the evaluation that “*The learning goals of the games were very well met, even though it was online.*”

Third, we slightly underestimated the time that it would take for a group of approximately 30 students to gain an understanding of how to use the new technology. Because the group takes part in the serious game together, the progress of the serious game operates in a relatively similar fashion to the principle of the weakest link. On various occasions, the group were only able to start or continue when everyone understood what they had to do, which created some delays. This was especially noticeable in the first workshop, when students were figuring out how Gather worked. Inevitably, some of these delays also partially came at the expense of the learning experience, given that students were preoccupied with learning the technology and therefore did not have the cognitive capacity to focus on the dynamics of the serious game. However, as they began to work with it, students quickly became more proficient in using the platform. Indeed, in subsequent workshops, students' skill level with Gather improved visibly, up to the point where some facilitators custom-made full 2D maps themselves to optimize the learning experience (see Figure 2).

Fourth, on a somewhat related note, not all features of Gather worked equally well, insofar as students had a different experience based on the browser they used and/or the speed of their computer. For example, on some occasions students were unable to see or speak to others, despite standing right next to them. Ordinarily, these kinds of problems were solved by letting the student restart Gather in a different browser, but such technological breakdowns did occasionally hamper the learning experience for the students involved. In addition, the combined use of Zoom and Gather in one instance resulted in there being no visuals or sound. Resultantly, although the many features of Gather clearly presented many advantages, they also presented some limitations. This led to some of the facilitating teams opting to run their particular serious game via Zoom, so that they could safeguard themselves against such technological problems. This allowed us to compare the experiences of workgroups that did not use Gather for their serious game to other workgroups where they did use it.



Figure 2. Screenshot of part of a custom-made map designed and used for one of the workshops.

Overall, we felt that students' experiences using Gather were much richer and more intricate than those who did not use it in their workshops. However, the serious games held via Zoom were safer in terms of ensuring that everyone was onboard, and therefore tended to guarantee somewhat more equal learning outcomes among all the students.

Finally, in line with the previous technical remark, we experienced that running a plenary discussion in Gather requires some rules and discipline. This is why the reflection upon the dynamics in the serious game and connecting these to theory were primarily done via Zoom. The students' reflections also indicated that for plenary sessions in which one person speaks at a time, Zoom was a better option: "*Gather does not always work perfectly with all students in one place/map*".

### Recommendations for Using Gather

When viewed together, we would thus highly recommend using Gather for experiential learning exercises, particularly when one is creating decentralized learning experiences in which interactions need to closely mimic those found in real-life interactions. For other teachers who would like to use it in their teaching, we offer the following suggestions and recommendations based on our own experiences.

First, offer a quick Gather discovery session for students and, if possible, make it compulsory. This not only helps to prevent some students from lagging behind (as indicated above) by helping them to learn how to solve technical issues, but may also help to prevent students from becoming distracted or preoccupied by Gather's features. For example, we observed that some students became so interested in figuring out how Gather worked that they failed to pay full attention to the serious game that they were supposed to be playing. This was confirmed by one of the students in their reflection report, who noted that "*We could have discussed a strategy, but we were playful and doing games within Gather*". Although this speaks to the interest that the students clearly had in Gather, an initial tutorial could help to prevent Gather's success from becoming its own downfall.

Second, because there are various maps and features available in Gather, one should think carefully about what type of situation and/or phenomenon needs to be simulated. While the possibility to alter and customize designs and features offers manifold possibilities to create many more real life-like situations compared to the static Zoom environment, there is also the risk of having a mismatch in designs and features, which can come at the expense of the learning experience, or—in the event that a design feature inadvertently influences the outcome of the serious game—even cause students to draw the wrong lessons from the exercise.

Third, online there appear to be lower thresholds for distractions (phone, built-in games, e-mail), and the same is true for Gather. Moreover, in classroom settings it is easier to

monitor a rule about not using a mobile phone during a workshop. It may help to discuss this issue upfront and ask all students to commit to focusing on the workshops and the games.

Finally, a combination of platforms appears to be the best way to run a full experiential learning workshop, with the serious game being ran via Gather, and the reflection being done via Zoom. That way, the strengths of each platform are applied in areas where those strengths are best utilized.

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