How a global pandemic fuelled an all-time career high in emergency remote teaching at the Faculty of Health Sciences, University of Cape Town

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During the first wave of the COVID-19 pandemic, health professions students at the University of Cape Town (UCT) were not allowed onto the clinical platform and had to learn **asynchronously** from home for at least four months. Online courses, in order to be successful, require extensive planning, explicit objectives and outcomes, multiple revisions and iterations, and a sound pedagogy underpinning them, among other factors.[1,2] The 'e' aspect of e-learning is used as an appropriate vehicle or tool to fulfil the outcomes and serve the pedagogy in meaningful ways. What we were about to embark on was not a true reflection of what e-learning is supposed to entail, as we had little (if any) time to plan, align to pedagogy, determine **online** learning outcomes, create and edit content and evaluate what had been done in a meaningful way – and we had no choice about the vehicle of delivery: this was to be the UCT learning management system named Vula. The university called this approach 'emergency remote teaching' to emphasise that this was not conventional e-learning.

As a medical educationist with an MPhil in Health Professions Education, I have a detailed knowledge of what makes a good teaching and learning experience, but so far this had only applied in a face-to-face setting. I felt very strongly that I still wanted my students to have a high-quality, enjoyable experience, despite not being in the room with their teachers. I wanted them to have as interactive an experience as possible, given that we were not able to include synchronous teaching owing to data costs, and I wanted them to have an emotional connection to the content, for 'if incoming stimuli are to cause synapse firing and strengthening, they must be accompanied by emotional involvement and interest'.[3]

I had never designed an online course before, yet our department was now expected to create four emergency remote teaching (ERT) courses, essentially overnight, two of which I was directly responsible for. I was reasonably familiar with Vula, but I had never built an online module before.

The interventions

Firstly, I did not and could not do it alone; collaboration was essential. I and my team engaged in several training workshops with the UCT Centre for Innovation in Learning and Teaching (CILT), who provided excellent guidelines as to how a site should be structured. This included creating a clear pathway for students to progress through, so the content was broken up into weeks and days, which students really appreciated. Furthermore, I worked according to the UCT student survey, which gave guidelines on the average time that most students could spend doing coursework. I tried to give fewer hours' work than the guidelines suggested in an attempt to ensure that all students could complete their tasks each day. CILT also advised on maximum file sizes, and they advised that all video content be transcribed.

Most of the content that I made was in video format, although we did make use of some narrated PowerPoint. I had had no idea how to make my own videos – would my phone be adequate, how would I transfer the videos, how would I hold the phone up? A fellow educationist colleague told me that all I needed was a tripod and my phone, and I managed to procure a cheap tripod just before hard lockdown.

There was very little to be purchased during hard lockdown, so most props had to be sourced from my own household. Examples of what was done during this time include: hand-stitching a pituitary gland and a thyroid; making an endometrium with hair gel and red glitter; biopsying a potato; making tiny sphygmomanometers for stuffed toys, and making a chicken hand puppet go into labour. Self-assessment quizzes were created for every topic, which had not been done before.

My team of undergraduate teachers also stepped up to the challenge of creating content, and I involved volunteer students in content creation, site construction and other logistics. Students helped with conceptualising the pathway through which fellow students would progress, helped to design the site, and two students in particular made excellent video content for contraception – the largest topic in our course content.

The first course I had to design was for fifth-year gynaecology students. I learned a lot from this experience, so by the time the third-year women's health block came around, I was able to design a better educational experience. During the time we were constructing the third- and fifth-year modules, the final-year students returned to the clinical platform. Because their clinical exposure was minimal owing to the lack of non-COVID-19 patients, we decided to have Zoom tutorials with simulated patient scenarios, which could now be synchronous, as students were back on campus. I became a number of different simulated patients for these videos. Simulated patient videos and tutorials were later applied to fifth-year gynaecology students when they too returned to the platform.

As someone with a flair for the dramatic, I revelled in the numerous simulated patient scenarios. Favourites were Zoya Lockdownikov (an extremely unsubtle Russian spy) and the Duchess of Covidshire in her sequinned hospital gown, who was always on the phone with various prime ministers and presidents.

What was learnt?

I was forced to think more deeply about students' home circumstances than ever before. Understanding the home spaces in which students were expected to learn was an eye-opening and invaluable experience, which had to be incorporated into my course planning. I learnt an extensive amount about technology, including video editing, which I had always felt

was beyond my capabilities. I learnt in the truest sense that students really respond positively to authenticity, effort and off-the-wall humour – it did not matter that the videos were not perfect, and my drawings were stick figures; in fact, I think students resonated with those little vulnerabilities in my work. They enjoyed the novelty of seeing a teacher in their home environment, with all the interruptions of pets and children. Yet again, I could see the importance of collaboration with others, especially with students, in creating content that they themselves had to consume. I also realised that scarcity inspires creativity: whatever was made was done with items already in the house, which forced me to think in a radically different way. I have never enjoyed my work as much as I did during this time, despite the attendant stressors.

I also really learnt the value of the flipped classroom approach. Students enjoyed consuming material in their time and at their own pace, and we began using face-to-face teaching time more productively – instead of teaching facts (which they now receive online), we are cultivating clinical reasoning around-the-case scenario videos.

How did the students respond?

In my eight years as an academic, I have never had such overwhelmingly rave reviews, especially from the third-year students. This group had to give compulsory feedback as part of their course requirements. I received so many emails of thanks on top of the compulsory feedback. Students were enthused; they were inspired; and they had learnt.

What will come of this?

Firstly, I have a revitalised vision of what face-to-face teaching time can be used for. From 2021 onwards, we will be using a blended learning approach, where blended learning is defined as: a 'learning environment that combines face-to-face instruction with technology-mediated instruction'.[4] Because of the factors that students enjoyed (which are reflected in the literature),[5] such as flexible and individualised learning, enjoyment, enhanced motivation to learn and increased opportunities for feedback, we will formalise the flipped classroom, where the vast majority of learning time for foundational concepts takes place outside face-to-face teaching time, and scheduled face-to-face teaching time is built around discussion, application and problem-solving.[6] In our case, these will be centred on the case scenario videos already developed, to help students consolidate and apply their knowledge. The content will be freely available as open-access resources on a dedicated web page, which is currently under development.

The saying 'Never let a good crisis go to waste' is attributed to Winston Churchill. I feel that we would never have reached these innovations and insights in the absence of the intense pressure caused by this global pandemic. The success of our interventions will be leveraged, in my opinion, to better educate future generations of doctors.

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Evidence of innovation

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