

Learning during a pandemic: Evaluating University of Cape Town first-year health sciences students' experiences of emergency remote teaching

N O Mapukata, MSc Med, MSc Health Care Management; S K Toto, BSc Occ Therapy

School of Public Health and Family Medicine, Faculty of Health Sciences, University of Cape Town, South Africa

Corresponding author: N O Mapukata (ntsiki.mapukata@uct.ac.za)

Why was the idea necessary?

In higher education institutions (HEIs), student evaluation of course outcomes is a standard that must be met by all programme course convenors to improve teaching quality and to deliver a student-centred curriculum.^[1] In the Faculty of Health Sciences (FHS) at the University of Cape Town (UCT), all first-year health sciences students (FYHSc) are required to register for two compulsory courses - Becoming a Professional (BP) in the first semester and Becoming a Health Professional (BHP) in the second semester. Both courses constitute the faculty's core curriculum. We follow a participatory and experiential educational approach, framed around an understanding of sound professional relationships as the focus of BP, and primary healthcare and disability as the focus of BHP. Students work collaboratively in small groups of 10 - 12, with a qualified facilitator, either on a Tuesday, Wednesday or Thursday afternoon.

During the 2020 academic year, following the declaration of COVID-19 as a global pandemic^[2] and the subsequent declaration of the national state of disaster in South Africa (SA),^[3] educators had to prepare for digital migration^[4] to online learning. At UCT, this migration was referred to as emergency remote teaching (ERT).^[5] While students were granted an extended vacation, educators had two weeks to adapt to an ERT mode of delivery. UCT introduced students to online tutorials that supported an adjusted ERT curriculum in the first week of term 2. For BP and BHP, we adjusted training sessions with facilitators to make provision for variables

that were likely to impact teaching and learning, such as the students' diverse backgrounds and learning environments; electricity load-shedding by Eskom; and data distribution and consumption patterns.

Considering the urgency with which we had to implement adaptations to teaching and learning, at the end of semester 2 we modified an existing survey tool so that we could source realistic feedback from students. Using a qualitative design approach, which was limited to evaluating adjustments to only BHP curriculum content, we asked three probing questions. These were tailored to evaluate students' experiences of lectures, weekly group tutorials and assessments (Table 1). This report sought to evaluate students' experiences of ERT with the aim to ascertain benefits and challenges of the learning experience, and to inform planning for a blended learning approach in 2021.^[6]

What was tried?

With teamwork as one of the key learning outcomes in BHP, students were introduced to public health to appreciate efforts to reorientate services to prevent ill-health and protect communities through the organised efforts of society.^[7] As lockdown regulations barred access to communities and health facilities, we substituted site visits with virtual visits to provide students with authentic experiences. We revised BHP course assessments and replaced an essay with an open-book assessment consisting of multiple-

Table 1. Modified survey tool

| Q1: lectures | Q2: weekly group tutorials | Q3: site visits | Q4: MCQ/SAQ, open book | Q5: online group presentations |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What were the benefits of receiving content as recorded lecture videos? | What were the benefits of participation in weekly group tutorials using an online approach? | What were the benefits of undertaking virtual site visits to communities and health facilities? | What were the benefits of evaluating your knowledge and understanding using an MCQ/SAQ in an open-book approach? | What were the benefits of online presenting as a group (pre-recorded or live)? |
| What were the challenges in sourcing lecture videos online? | What were the challenges in undertaking group work in this manner? | What were the challenges regarding learning about communities/facilities if content was presented in a pre-recorded format? | What were the challenges of being assessed in this manner? | What were the challenges of being assessed in this manner? |
| If you were presented with options, would you prefer content to be delivered online, face to face in lecture theatres or would you rather have access to both formats (online and face-to-face)? | If you were presented with options, what would be your stated preference regarding weekly tutorial sessions (online or face-to-face)? | If you were presented with options, what would be your stated preference for community and health facility site visits? | If you had an option, would you prefer to continue with an MCQ/SAQ assessment (open book) or would you prefer to present your knowledge in the essay format? | If you were presented with options, would you prefer your group presentations to be assessed online (pre-recorded) or online (live) or face-to-face in front of your classmates? |

Q = question; MCQs/SAQs = multiple-choice questions/short-answer questions.

choice and short-answer questions (MCQs/SAQs) that assessed students' understanding of applied knowledge in context.^[8] For example, to test students' understanding of the concept of health for all (HFA), each student was asked to draw up an HFA manifesto for the FHS in preparing for a term of office in the Health Sciences Students Council. This exercise was critical in identifying what students considered to be priority needs for a community of health sciences students. Many students mentioned access to equitable healthcare, some even suggesting the establishment of a student clinic on the health sciences campus or at Groote Schuur Hospital. Interestingly, this was one of the students' demands during the 2016 #OccupyFHS student movement. Other priority areas were access to healthy meals at the canteen, and a more specific request was the delivery of medication to students living with conditions such as HIV and tuberculosis (TB).

Lessons learnt

The course evaluation that was structured to evaluate students' experiences of ERT yielded a response rate of 67% ($n=262$), which taught us many valuable lessons.

Lectures. Most of the participants (66%; $n=258$) were in favour of blended teaching approaches and assessments that included face-to-face and prerecorded lectures:

'I was able to take notes while watching the videos and re-watch certain parts.' Participant 7

Another benefit of ERT that was mentioned by a few participants was the opportunity to manage one's own time and being in control of the learning experience:

'I love the flexibility of online learning in terms of time and study hours. Also, more importantly, the ability to catch up lectures and pause them and rewind and re-watch for me, that makes a big difference in learning because I can learn at my own pace.' Participant 23

For a third of participants, ERT denied them the validation and authenticity that come with attending lectures, where they can engage their lecturers:

'For myself, I remember the content of a lecture much better when I can both see and hear the lecturer, so it becomes difficult to learn when I cannot see the lecturer.' Participant 37

We also learnt that learning is not always consumed in structured settings and that we should focus on the attitude to learning:

'Ability to switch off the cameras and even attend the meeting while lying on the bed.' Participant 34
'Online learning was greatly beneficial ... I found lecture halls distracting.' Participant 180

Some participants reported that they experienced technical challenges, while a few struggled to negotiate study time in their natural environments:

'Technology just fails us at times ... I don't know how many times my laptop crashed this semester and that was really stressful for me.' Participant 205
'Another challenge I faced was balancing between household duties and schoolwork, as staying at home all day came with taking on more responsibilities.' Participant 226

Group sessions. With the implementation of ERT, we approached group sessions with the student in mind. Contact sessions were negotiated

with each group and were offered synchronously or asynchronously on a preferred platform, such as Forums on Vula (UCT student portal), Zoom, Whatsapp or Microsoft Teams:

'I learnt how to work with people virtually, which I think will really help me in my career.' Participant 1

This was not without its challenges, as the students in the groups were very diverse:

'Another thing that was a hindrance was how my group members and I came from different backgrounds.' Participant 115

Weekly training sessions with facilitators provided opportunities for us to receive feedback about the performance of each student. In that regard, it was possible to monitor the performance of individual students and refer to faculty if they faced challenges that were likely to impact learning outcomes.

MCQ/SAQ. We replaced one essay and introduced students to a combined MCQ/SAQ assessment. Most participants (66%; $n=258$) preferred to have an option of substituting one essay with an MCQ/SAQ assessment and reiterated the value of being in control of their learning experience:

'It helped to test my knowledge of the work we have covered during the semester. I was able to assess whether I understood the work or not.' Participant 35

'This approach is less time consuming than presenting knowledge in an essay format.' Participant 29

Virtual site visits. There was an appreciation of learning about primary healthcare and the healthcare system through virtual visits:

'The videos really helped me understand healthcare in the South African context. It was informative and helped me understand the theory. I got to experience South Africa's people and its healthcare systems in much more depth than my textbooks.' Participant 101

Online group presentations. Although there was stated preference to submit prerecorded online group presentations by several participants (62%; $n=242$), there was an acknowledgement that for some groups connectivity and communication presented major challenges:

'The challenges were with group participation in an online format. There were sometimes data issues or problems recording, some people were difficult to contact and thus contributed less than others. There is less accountability in an online format to group set commitments.' Participant 241

What will I keep in my practice?

Considering the size of our 2020 class ($n=391$), we attributed technological challenges to students being based in contexts that were sometimes ill-defined and could not facilitate learning.^[4] Having access to prerecorded group presentations when these are recorded on site is a practice we wish to maintain. It was easier to moderate group presentations and institute quality control measures than work from memory.

What will I not do?

Although it was possible to mitigate an emerging crisis, only 44.5% ($n=174$) of participants preferred virtual visits. In replacing community

and healthcare facility visits with virtual site visits (QR code), lack of contentment among students was attributed to missed opportunities to experience contextualised visits to health facilities.^[4]

'We were not able to ask questions or have our own first-hand experiences and perspectives.' Participant 52

Nonetheless, participants acknowledged and appreciated the objective of the exercise, as the virtual visits ensured their safety from COVID-19:

'We were not at risk of encountering COVID patients in the facilities where they would be treated.' Participant 63

Conclusions

The BHP course evaluation offered insights regarding aspects of ERT that FYHSc students considered most valuable and challenging.^[1] It facilitated conversations where their input contributed to our deliberations as we prepared to pursue a blended approach^[4] in a 'physically-distanced, low-density campus.'^[6]

Declaration. None.

Acknowledgements. We are grateful to Tsuki Xapa, the class of 2020 and the BP/BHP facilitators.

Author contributions. NOM conceptualised the study. SKT developed the QR code. Both authors contributed to the final manuscript.

Funding. None.

Conflicts of interest. None.

Evidence of innovation



1. Hammonds F, Mariano GJ, Ammons G, Chambers S. Student evaluations of teaching: Improving teaching quality in higher education. *Perspect Pol Pract High Educ* 2017;21(1):26-33. <https://doi.org/10.1080/13603108.2016.1227388>
2. World Health Organization. WHO Director-General's opening remarks at the media briefing on COVID-19, 11 March 2020. <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media> (accessed 3 February 2021).
3. South Africa. Disaster Management Act 57 of 2002, as amended. <https://www.gov.za/documents/disaster-management-act-declaration-national-state-disaster-covid-19-coronavirus-16-mar> (accessed 3 February 2021).
4. Adedoyin OB, Soykan E. Covid-19 pandemic and online learning: The challenges and opportunities. *Interact Learn Environ* 2020;1-3. <https://doi.org/10.1080/10494820.2020.1813180>
5. University of Cape Town. From the VC's desk. COVID-19 update: UCT commences term 1 vacation immediately. 2020. <https://www.news.uct.ac.za/article/-2020-03-15-covid-19-update-uct-commences-term-1-vacation-immediately> (accessed 3 February 2021).
6. University of Cape Town. From the DVC's desk. Undergraduate teaching and learning at UCT first semester 2021. 2020. <https://www.news.uct.ac.za/article/-2020-12-07-undergraduate-teaching-and-learning-at-uct-first-semester-2021> (accessed 3 February 2021).
7. Zweigenthal VE, Pick WM, London L. Career paths of public health medicine specialists in South Africa. *Front Public Health* 2019;7:261. <https://doi.org/10.3389/fpubh.2019.00261>
8. Rose S. Medical student education in the time of COVID-19. *JAMA* 2020;323(21):2131-2132. <https://doi.org/10.1001/jama.2020.5227>

Accepted 2 August 2021.

Afr J Health Professions Educ 2021;13(3):205-207. <https://doi.org/10.7196/AJHPE.2021.v13i3.1483>