Pedagogy to probity

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Why was the idea necessary? (What was the problem?)
Online in a hurry
At midnight, Thursday 26 March 2020, South Africa (SA) was declared a state of disaster and entered a nationwide lockdown to curb the rapid spread of COVID-19. South Africans were instructed to stay home and all but essential services closed down. Educators immediately started utilising technologies to transform a massive amount of academic content onto a virtual platform. An acceptable alternative had to be offered to students to save the academic year.

Unique content
What do a new campus orientation, class-representative election, meeting the Deanery and lessons learnt by senior students have in common? Nothing, except for 300 first-year medical students and a 1-week first-year compulsory course that had to be converted to an online experience. This was the challenge that presented itself to the lecturer. The module 'Introduction to the study of medicine' is a 1-week course designed to do just that. Newly selected first-year medical students had to be introduced to the medical campus, the structure of the Faculty of Healthcare Sciences and the healthcare system of SA. Students needed to be informed of campus activities, student committees, student support, campus layout, campus security, library services, administrative arrangements, financial responsibilities and what would be expected of them as medical students. This module is not an academic course although it is credit bearing. Students received a collated completion-mark at the end of the week.

This course kicks off the new students' journey to becoming doctors. For educators this provides a valuable opportunity to lay the foundation for professional integrity, ethical practice, benevolence, respect, commitment to excellence and justice in healthcare.[1]

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For medical students, cognitive skills, such as clinical reasoning and procedural or academic skills, can be and have been taught effectively online.[2,3] First-year students are at the onset of the process of developing their identity as learners, novice health professionals and future clinicians. To train well-rounded doctors, human values need to be embedded and fostered early and sustained across the lifelong process of learning.[1] Conveying these narratives is essential and can easily disappear in an online platform.

What was tried? (Intervention)
Five different online interventions were created to orientate, include and entice the students (Fig. 1).

A sense of inclusion and belonging: By students for students
'Co-creation occurs when learners and educators work collaboratively with one another to create online resources and activities.'[4] The co-creation of online materials has benefits for both learners and educators. Learners are more engaged and self-efficient and online materials are improved, authentic and innovative.[5]

With the concept of co-creation in mind, the final-year class representative was asked to record an orientation video (https://youtu.be/yI7ZNn7sqo8) aimed at introducing new students to the medical campus. The result was

a witty, entertaining video capturing all the interesting features of the campus with insights from experiences of a fellow student.

In addition, the second-year class representative conducted a panel discussion including the Dean, Deputy-Dean (teaching and learning) and the chairperson of the School of Medicine (https://youtu.be/ykxIHc0u6Q0). The second-year class rep was selected because she had been in the first-years' shoes not too long ago, and had a good sense of what information would have made her first-year journey easier. The new first-year students voiced deep appreciation towards both senior students for creating these videos, since it fostered a sense of belonging and inclusion – something that is extremely difficult to create in an exclusively online environment.

Participatory management
Communication is vital in times of uncertainty, as is students' participation in aspects related to their sphere of control. When students are given choices, they will take ownership of processes and decision-making. This is difficult enough in a contact environment, but applying these principles in an online environment is even more tricky. Therefore, when the first-year class representative had to be selected, the lecturer was faced with the challenge of unfamiliarity among student peers regarding volunteering as a candidate and the process of voting. To facilitate the process, the lecturer sent out a communique to inform students about the class-rep election. A
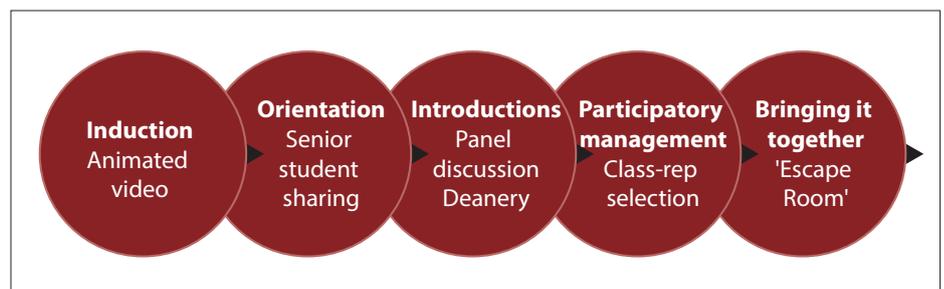
Fig.1. Online initiatives developed.

digital pin-up board (Padlet) was created and volunteers could paste their photos and a short campaign message on the board. Students could then vote anonymously (by way of 'likes') for their choice of representative. This was a highly effective and uncontested approach.

Assess without distress

Medical students have higher rates of mental health challenges compared with the general population, as evident even before the COVID-19 pandemic.[6] Stressors contributing to excessive strain among medical students include a high academic workload, competitiveness, constraints in work-life balance, family demands, financial difficulties, and exposure to human suffering.[7] The COVID-19 pandemic contributes adversely by exacerbating dormant or already existing mental health conditions in medical students, but can also precipitate additional anxiety that may affect their physical, emotional and mental well-being.[8] Long-standing social distancing, being away from campus without peer interaction, difficulty with online learning, fear of being infected by COVID-19 or dealing with loved ones being sick with COVID-19 are some of the stressors experienced by medical students as a result of the pandemic.[8]

In an attempt to alleviate some of the stress, an element of competitive fun and game-based learning and assessing was introduced into the module.[9] In collaboration with the educational consultant, a digital 'Escape Room' was created. The 'Escape Room' focused on all aspects of knowledge accumulated at the end of the week. This was a fun and stress-free way to reinforce and assess those concepts. The design principles were based on the 'magic circle' of challenge, response and feedback.[9] Students thoroughly enjoyed the innovative method of assessment and student feedback was overwhelmingly positive.

Lessons learnt
Sharing the burden, communication and student participation

Accessibility should not be assumed. Students with difficulty in obtaining web connections, data and devices should be identified early and supported. Lectures and any asynchronised discussions should be recorded and made available to students who were unable to connect at the time.

Familiar platforms should be utilised, preferably pre-existing learning management systems, to ease navigation for both students and educators.

Including students in producing lecture material immediately triggers attention and interest. This also fosters a sense of belonging and kinship among peers. Senior students are looked up to with a sense of 'if they can do it, so can we'.

What I will keep in my practice

Although the transition to a virtual platform happened hastily out of necessity, it did not happen without reflection. Utilising available technologies innovatively can be achieved by collaborating with educational specialists. Alternative methods of content delivery, suitable for distant instruction, were designed and introduced. From the above initiatives, I will definitely keep all of them – even if we transition back to on-campus facilitation. The welcome and introduction video made by the senior students was a major 'hit' and brought a fresh perspective into the week. In pre-pandemic times, it would have been close to impossible to get senior management in one room simultaneously and have a junior student interview them, getting up close and personal. With this approach, students were introduced to senior management, with the latter revealing a more personal aspect that would not have been achieved with a face-to-face setup. Students felt included in the vision and mission of the faculty. The Escape Room converted a boring online test into an innovative and engaging activity. Selecting the class rep via a digital pin-up board and voting system saved time, and was effective and efficient. Students loved these initiatives and participated with much enthusiasm as reflected by their feedback report.

What I will not do

I will never go back to a lecture-based module where students are passive recipients of information. I will not attempt to convey large amounts of information that students are not able to relate to and interact with. I will not assume that students are not able to contribute to material and structure that make lectures more appealing to their peers.

Evidence of innovation

1. Goh P-S, Sandars J. Using technology to nurture core human values in healthcare. MedEdPublish 2019. Published online 5 December 2019. https://doi.org/10.15694/mep.2019.000223.1
2. Pei L, Wu H. Does online learning work better than offline learning in undergraduate medical education? A systematic review and meta-analysis. Medical Education Online 2019;24(1). Published online 17 September 2019. https://www.tandfonline.com/doi/full/10.1080/10872981.2019.1666538?src=recsys (accessed 1 March 2021).
3. Vaccani J-P, Javidnia H, Humphrey-Murto S. The effectiveness of webcast compared to live lectures as a teaching tool in medical school. Med Teacher 2014;38(1). Published online 13 October 2014. https://doi.org/10.3109/0142159X.2014.970990
4. Bovill C, Cook-Sather A, Felten P, et al. Addressing potential challenges in co-creating learning and teaching: Overcoming resistance, navigating institutional norms and ensuring inclusivity in student-staff partnerships. Higher Educ 2016;71(2):195-208. https://doi.org/10.1007/s10734-015-9896-4
5. Mercer-Mapstone L, Dvorakova SL, Matthews K, et al. A systematic literature review of students as partners in higher education. Int J Students Partners 2017;1(1). https://doi.org/10.15173/ijsap.v1i1.3119
6. Mousa OY, Dhamoon MS, Lander S, Dhamoon AS. The MD blues: Under-recognised depression and anxiety in medical trainees. PLoS ONE 2016;11(6):e0156554. https://doi.org/10.1371/journal.pone.0156554
7. Hill MR, Goicochea S, Merlo LJ. In their own words: Stressors facing medical students in the millennial generation. Med Educ Online 2018;23:1530558. https://doi.org/10.1080/10872981.2018.1530558
8. Sandars J, Correia R, Dankbaar M, et al. Twelve tips for rapidly migrating to online learning during the COVID-19 pandemic. MedEdPublish 2020;9(1):82. https://doi.org/10.15694/mep.2020.000082.1
9. Plass JL, Homer BD, Kinzer CK. Foundations of game-based learning. Educ Psychol 2015;50(4):258-283. https://files.eric.ed.gov/fulltext/EJ1090277.pdf (accessed 1 March 2021).