Reflections on a pandemic

Teaching and learning in the time of COVID-19

A collection of think pieces and short reports from members of SAAHE

Compiled by the SAAHE HPE Research SIG

"There's really a playbook being written in every country that we're learning from. It's one giant experiment, made up of lots of little experiments in every country, in every jurisdiction."

Ian MacKay, *The Guardian*,11 May 2020.

October 2020

Contents

1. Teaching in the times of COVID-19: student experiences and academic performance

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Background

The University has been using an online Learning management system (LMS), Moodle, for academic learner management before COVID-19 and used this platform during COVID-19 to assist in online teaching. The online platform's features enable the instructor to create lesson plans and learning content as well as monitoring student engagement. Educational material can then be delivered in many forms including integrating videos within lessons, or interactive learning activities using H5P technology, online quizzes and many more.

Forum discussions were implemented in our weekly lesson outcomes for second year Emergency Medical Care (EMC) students to facilitate academic discussions

Students could ask and answer questions and build on submitted answers in *wiki* style in collaboration with their peers. Instructors posted learning objectives, with weekly questions to prompt student thinking and drive engagement within the online forum discussions. Instructors endorsed student responses with correct answers and led follow-up questions and discussions.

We monitored 26 second year EMC students' experiences regarding online teaching as well as its influence on academic performance. From weekly student surveys, we received feedback on the perceived experiences of online teaching and could identify areas to improve on. The results of online assessments were also analysed and compared to the previous year's average academic class performance on the same learning content that was given using face-to-face class lectures.

Findings

Experiences: Forum discussions was perceived as being an old and non-relevant online discussion method which did not drive student engagement in online learning activities. Students showed willingness to learn, but do not receive or perceive the content delivered to them, as enough to keep their focus and attention. Students indicated consistency and time of delivery as facilitators for online learning. They further indicated that they want to have a reason and motivation for every point on the learning agenda. If learning content does not make logical sense, and if they find no reason or application, they disengage with the learning content.

Academic performance: students' average academic class performance using Moodle as an online learning platform for teaching, was the same when compared to previous years' average academic class performance when using face-to-face traditional class lectures.

Lessons learned

Teaching in the time of COVID-19 has forced us as instructors to change our mode of teaching rapidly from traditional face-to-face lectures to virtual classrooms. We have learnt that although online teaching does not necessarily affect academic performance as compared to traditional face-to-face lectures, there is a need for the use of innovative online methods to facilitate online teaching that is consistent and uses appropriate timeframes. The content delivered should be logical and should be applicable to student's learning needs.

We recommend instructors should receive training in the use of innovative online methods and to adapt the content and mode to enhance engagement of the students. Future areas of improvement should focus on exploring interdisciplinary and interdepartmental collaboration (e.g. with ICT departments) to develop supporting materials and resources facilitating the online teaching and assessment of students in healthcare education, including EMC.

2. Lessons learnt about video conference assessments during the COVID- 19 pandemic.

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The longitudinal integrated model (LIM) of the Stellenbosch University Rural Clinical School places groups of 2-3 final year medical students at district hospitals for an entire year. The students' learning is centered on patient encounters. Each student must compile a portfolio of patient studies which consists of 8 to 10 patients per clinical domain. Students self-select their patients and must identify key learning areas. Assessments for each of the clinical domains consist of a face to face interview where the student presents a patient and is questioned by a specialist in the relevant clinical domain and a family physician using an interview scoring rubric to assess the students' knowledge and clinical reasoning.

The Covid-19 lockdown prevented us from performing face to face assessment interviews, so we arranged for all the patient study assessments to take place via video conferencing. We had previous experience of using videoconferencing for online tutorials. The format of the assessment did not change as it was based on having a conversation with the student and this was easily migrated to the online environment. However, together with the students we identified what worked and what issues required improvement.

What worked? Having an administrator arranging the assessments and doing a test run with each of the new examiners to ensure familiarity with the videoconference software was crucial to our success. Communicating the time allocation for patient presentation, questioning, consensus scoring and feedback to students and examiners before the assessments improved their flow and created a common understanding of how the time should be spent. Some examiners performed the consensus scoring after giving feedback to the student while others asked the student to disconnect from the videoconference and then reconnect after a text message was sent to the student. This allowed for discussion of the feedback and mark allocation amongst examiners.

What will we do differently? The issues experienced related to some logistic arrangements and mark allocation. We will not assume that examiners previously involved in face to face assessments have the rubric ready and understand the assessment process. We had very limited time to train new examiners in both the videoconference software and the assessment technique, whereas assessment training and clear instructions for all examiners was found to be a crucial aspect of ensuring success in videoconference assessments by Wilkinson et al (2020). A short training video will be created to deal with this challenge.

Students complained about not understanding the process of mark allocation although it was discussed earlier during the year. We also recognised that examiners' ideas about the meaning of the marks allocated might be different from the students and from each other. We thus decided to build clear descriptors for the mark allocation into the scoring rubric as recommended by Wass (2017).

In conclusion, having to shift all our patient study assessments to the online space, we have learnt that prior experience with the online environment eased the process, but structure, clear communication and transparency are essential components in videoconference assessments.

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3. Breaking the mould: delivering online workshops for COVID-19

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Starting in 2019, AFREhealth (African Forum for Research and Education in Health) and UCSF (University of California San Francisco) embarked on a project called Strengthening Inter Professional Education to Improve HIV Care (STRIPE HIV) across Africa (Reid M, et al, 2020). The goal of STRIPE HIV is to improve the ability of health professional graduates from AFREhealth-affiliated health sciences training institutions to deliver high quality, team-based, person-centered care to persons with HIV. A panel of 10 experts, representing faculty members of nine medical and nursing schools in sub-Saharan Africa (SSA) developed a training package consisting of 17 HIV modules focused on core clinical, public health, interprofessional care and quality improvement (QI) domains related to HIV service delivery. Training was delivered through two-day workshops covering a number of these modules, participants gaining proficiency in many areas of HIV management, while recognizing the importance of interprofessional care and a culture of quality improvement. Feedback from participants has been very positive

Stellenbosch University network for strengthening rural interprofessional education (SUNSTRIPE) project, one of the partner institutions, presented 6 of these workshops from October 2019 to March 2020 in the Western Cape (WC), Northern Cape (NC) and Eastern Cape (EC) provinces of South Africa. These workshops were presented in partnership with the University of the Western Cape, Walter Sisulu University in the EC and the Henrietta Stockdale Nursing College in the NC.

With the onset of the COVID-19 pandemic UCSF developed a COVID-19 module to be delivered as part of the STRIPE HIV workshops. However due to contact and travel restrictions imposed by the pandemic, SUNSTRIPE was unable to continue with face-to-face workshops. Subsequently, an adapted online COVID-19 interprofessional workshop was developed to provide participants with skills in the basic assessment and management of COVID-19, and in the risk management of healthcare workers. After experimenting with different formats and platforms, the workshop is being delivered as two 90-minute sessions using Zoom. More than 400 people have now been through these workshops, indicating they appreciated the interactive engagement with the material and the degree of interprofessionality. Participants included both qualified health professionals and undergraduate health sciences students representing medical, nursing and allied health professions.

SUNSTRIPE has now embarked on a further project to adapt four of the 17 STRIPE HIV modules to be delivered as online workshops through the experience gained with the COVID-19 workshops. In addition, the COVID-19 online workshop as well as another STRIPE HIV module will be adapted to be delivered as asynchronous inter-professional workshops. The intention is to present a virtual workshop over a number of days to groups of qualified health care professionals and students in institutions without good internet access, focusing on the use of mobile phone technology.

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4. Continuing to reach and be reached: Anaesthesiology and Critical Care

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I reflect back on my med school days on physiology and histology lectures presented on an overhead projector. Yes! An overhead projected, an ancient piece of equipment that has formidably shaped and formed the academic giants amongst us. An unmissed tool, gathering dust in forgotten parts of the faculty. I find myself wondering how my lecturers of old would adapt to the current COVID situation. The effects of social distancing have forced us to rethink academic platforms and our approach to clinical outreach as well as removing us from our technophobic shell to the extent that this is the new "normal".

The new "normal" obligates online platforms, distant learning with a cautious continuation of clinical services. In this new world the Stellenbosch University department of Anaesthesiology and Critical Care(SUNDACC) views their role and expertise in this crisis with great earnest. Airway management and intensive care has never been more important and simultaneously never been more dangerous. Reaching peripheral hospitals, leveraging and upskilling the work force is an ongoing priority for the department of Anaesthesiology and Critical Care [1].

The SUNDACC exercised their commitment to the education and training of both undergraduate and postgraduates utilized pedagogical tools such as *SUNLearn, with* vodcasts and webinars followed by interactive ZOOM sessions*. A* system that has proven to reach more students and will in future serve as educational tool of choice. This platform has allowed us to reach beyond our borders forming relationships with American and European universities. SUNDACC has continued cross-pollination in the time of COVID in the form of an evidence-based perioperative medicine live link series of lectures and academic discussions. Building on these international partnerships this forum of knowledge sharing will continue in the future in form of webinars cementing the education provided here as world class.

COVID-19 has forever reshaped the world. The academic and clinical world along with it. The pandemic has highlighted the value of intensive care training as the demand on critical care has exploded. However, South Africa has only 80 trained intensivists in the country, the need for intensive care far exceeds the service that these 80 clinicians could ever provide[2]. In a bid to extend the reach of intensivists at Stellenbosch University various platforms have been utilized to not only extend service but also to educate and upskill those called to the frontlines. Bedside teaching is fundamental to training of every good clinician and has been made possible through video robots which help mitigate risks on ward rounds and allowed for patient-based learning to continue.

Inter and intra-hospital referrals have also had a safety revamp. The DACC's previously paper-based system has been overhauled to the electronic medium afforded by *VULA app*[3]. This electronic system not only allows for a safer and ongoing clinical service but will serve as the medium for exam preparation for senior registrars. The peripheral hospitals now also benefit from the VULA app as well as an intensivist run WhatsApp advisory group which aides in triage; facilitates academic discussion and advises on critical care management. This platform will supplement outreach activities in future.

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5.   A Carousel Learning Structure Influencing the Future

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The sudden shift

Universities were catapulted into the Covid-19 pandemic and the academic year 2020 will be remembered for the global health and socio-economic challenges. In South Africa, the impact on higher education was encapsulated in the bid to save the academic year and leave no student behind. The response took on a common theme to introduce a multimodal pedagogical model that built on experiences in blended learning for the preparation and delivery of content, student engagement and learning and assessment of theory and competencies. The dominant feature of the sudden shift from face-to-face teaching was online learning, facilitated by relaxation of regulations for contact universities to allow responsiveness and agility to the changing world.

Multimodal Model

One interpretation of the multimodal pedagogy was the Carousel model, introduced as a mechanism to ensure continued student learning through activity zones from low technology provision of print material, to on campus teaching according to strict limitations, increased use of the learner management system or other online avenues, clinical placements or virtual clinical learning and more.

Reflecting on the Intervention

Early reflection indicates the Carousel model of rotational curriculum activities accommodated varied learning styles and social circumstances that affect epistemological access. It is cautiously proposed that the multimodal design fast tracked most students into more independent, self-directed learning and thinking as they gained self-sufficiency in the face of challenges. If we realise the learning from this painful opportunity, the pandemic could positively influence curriculum into the future.

The design was introduced as individual student learning with some group activities that more closely resembled the Carousel model as a cooperative learning strategy to engage students in small group discussion, movement and reflection (Al Fajar, Soetjipto, and Amirudin, 2017). We would do well to build in more student to student engagement in the next generation of the multimodal, Carousel model so as to enhance group work, discussion and reflection as a space for encouraging the interdisciplinary learning that is much needed in health care settings.

Remote learning can lead to poor educational outcomes, however a combination of classroom-based and online learning may be a more cost and time efficient way to facilitate the learning of professional competencies that are effective and potentially more inclusive and culturally appropriate (Martin, 2020). Just possibly the pandemic will help us to create a more caring and supportive environment so that more who gain access to our health science programmes will be successful.

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6.   Vulnerability and Presence: What will we do differently as a result of COVID-19?

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The UCT Division of Family Medicine's engagement with the challenge of delivering the undergraduate and postgraduate medical training curriculum was not only characterised by a need to engage with the uncertainty of the pandemic period. It was also the contention with the novel ways in which vast socioeconomic inequality was thrown into acute relief. While the outcomes of the engagement by each course and programme convened by the division were predictably diverse, they seem on reflection to have thematic resonances. One of these resonating themes is a tacit engagement with the pedagogies of vulnerability and presence. This will be illustrated throughout the descriptions in this submission and offers a conceptual framework for the points of departure for innovation that will be proposed.

In the undergraduate pre-clinical program, the aim is to revisit notions of student learning and reconsider the way students are taught (Mbembe, 2015). A practical example of ongoing renewed thinking are exercises in which medical students use an online recorded WhatsApp formative role-play exercise that not only accommodates the needs of the most vulnerable students in a poorly resourced, low -tech environment but also seeks to reveal the multiple ways in which students' tacit knowledge of digital learning is displayed. It is asynchronous and suits both student and teacher in a learning relationship that harnesses self-disclosure and uncertainty yet promotes deeper learning (Brandtmeier, 2013).

The undergraduate clinical training programme began with Emergency Remote Teaching and was followed by a blended approach of online learning and experiential clinical service learning. There was pre-engagement with online content which encouraged students to have enriched clinical exposure while gaining valuable experience from the clinical response to a pandemic. Future plans include the continuation of the blended learning approach using WhatsApp, Zoom and Vula (the University of Cape Town's online collaboration and learning system) platforms to maximize the time for clinical teaching, and to pursue an Integrated Teaching Platform for the rural rotation.

The postgraduate diploma and master's programmes experienced shorter synchronised contact time (from weekly 3-hour face to face sessions, to weekly 1-hour Zoom meetings) and this contact became dedicated to touching base, offering support and social cohesiveness. Asynchronized, more individual contact (via WhatsApp) between students and trainers represented learning around patient encounters in the daily clinical workspace. This format will continue to facilitate authentic, "just-in-time" (need-related) learning experiences and harness elements of a pedagogy of vulnerability.

The COVID-19 pandemic provides us with an opportunity for a more student-centred approach that sees the teacher-student relationship as a partnership of co-learning and risk taking. It is a chance to welcome self-disclosure, uncertainty and failure to deepen learning (Brandtmeier, 2013). Our long-term vision is to use the pandemic as "an opportunity to not only rethink online, digital pedagogies but also to reimagine education…" where creating new, intersective relationships, new forms of learning and a new respect for different modes of knowledge is valued to create more equitable, humane and just societies (Mbembe, 2015; Peters et al, 2020:2).

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7.   The role of elective students in the COVID-19 response: A case study at the University of Cape Town, Faculty of Health Sciences

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Background

The UCT Faculty of Health Sciences has since 2016 offered two elective courses for senior MBChB students to gain further clinical, research, or public health experience. The Faculty's COVID-19 pandemic response provided the opportunity to offer prescribed electives, or 'selectives', to student volunteers for academic credit.

With assistance from student societies (UCT Surgical Society COVID-19 Student Taskforce initiative[1] and SHAWCO Health), students were recruited according to preference for COVID-19 public 'hotline' shifts at the provincial Disaster Management call centre; for home-based telephonic case and contact tracing; for a hospital-based Health Screening and Testing Centre; or for hospital-based COVID-19 clinical duties. Volunteers were incentivised by means of a *UCT Plus Leadership through Community Service Award,* based on hours worked and a reflective activity, which will show on awardees' academic transcripts.

We describe the main learning experiences of selective students doing non-clinical COVID work during April to August 2020, and we identify some key lessons.

Findings

The reports of ten year 5 and sixteen year 6 selective students, as well as comments from their supervisors, were reviewed by JI, convener of the elective courses, and VZ, leader and primary supervisor of the contact tracing selectives. Students reflected on how they achieved their prior learning objectives, on the positives and negatives of their experiences, and made some recommendations for the selectives.

All students reported that they benefitted in various ways: gaining a deeper understanding about COVID-19 clinical management and the logistics of the pandemic response; sharpening their skills in telephonic interviewing and counselling; and experiencing excellent teamwork and support from their allocated supervisors. They enjoyed 'making a difference', despite long and emotionally draining shifts. They faced the challenges of tracing individuals, of language barriers, and of telephonic history-taking and counselling, while coping with the concurrent demands of remote academic learning for the first time. Students described the need to prepare well and to reflect regularly as a coping strategy; made helpful suggestions for orientation; asked for regular evidence updates and further training in handling 'difficult' callers; and requested additional COVID-19 selective options in future. Students were commended by their supervisors for their professionalism, empathy, teamwork, and initiative, which included one student having the contact tracing interview guide translated into Afrikaans and Xhosa.

Lessons learnt

Excellent communication between Faculty, staff and students enabled swift identification of selective opportunities. The proactive recruitment of volunteers by student societies, incentivised by a community service award, facilitated early and substantial uptake of these opportunities.

Good orientation to strategy and work processes should be complemented by regular protocol updates for both staff and students. Students should be respected as integral members of the health teams and should be well supported by personal supervisors. The mental health toll of the work must be mitigated by ready access

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[1] https://covid19taskforce.wixsite.com/uctsurgicalsociety

to student health and counselling services. Student feedback should be encouraged to inform continual improvements to the selectives program.

In conclusion, despite limited access to clinical platforms during the review period, medical students contributed meaningfully to the provincial COVID-19 pandemic response, enjoyed their experiences, and acquired valuable skills that are core to their graduate competence.

8.   Raising your hand and going mute: training family medicine registrars in a rural district

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Teaching in health care typically involves the exchange of knowledge and experiences between two or more health care practitioners and/or students, based on a patient being cared for, in a specific context. One assumes some form of face-to-face interaction within a professional relationship, where communication skills such as active listening, empathy, kindness and respect are inherent.

Health education in rural areas such as the Garden Route and Central Karoo districts poses particular challenges, with registrars spread across large geographic areas. Prior to covid-19 clinical teaching relied on the local family physician who might not always be available due to clinical responsibilities. This meant that planned teaching did not always occur. Substituting someone else when the local family physician was unavailable was difficult due to the distances between facilities in rural areas. Prior to covid-19 the one electronic tool to support workplace-based training and assessment was the e-portfolio.

Since covid-19 has stopped face-to-face meetings, the e-portfolio, with supervision from a distance, has become an indispensable tool in our assessment armamentarium. Registrars upload educational activities and the supervisor at a distance validates and gives feedback. Furthermore, face-to-face educational meetings and learning conversations now happen in cyberspace. One typical platform is Microsoft Teams[©]. Another platform is Zoom[©]. These tools were not used pre-covid-19. It's not the same as being personally close-up with students and teachers, but it's much better than no meetings. We are adapting to this new way of communicating, e.g. 'raising your hand' by hitting a button on a computer screen, muting yourself to allow someone else to talk uninterrupted, thinking critically through questions and then posting them for all to see in the 'chat' section of the meeting, to be answered immediately or later. If a teacher is presenting on a topic, with a clinical discussion and questions and answers, the session is recorded, and can be viewed later for those who missed it or want to revisit the session. The online platform also serves as a record of the teaching activity that took place, for formative assessment purposes.

Another change revolves around the teaching of ethics in healthcare. Pre-covid-19 we arranged district wide workshops for health professionals. This incurred travel and accommodation costs, time over a weekend or a Friday, and logistical support around catering, venue, etc. During and post-covid-19 this translated to a monthly Friday afternoon meeting via MS Teams. An expert in Ethics from the Stellenbosch University School of Business, together with a family physician consultant attached to the Faculty of Medicine and Health Sciences and a medical manager in the health service coordinate the teaching session. The content is focused on the needs of meeting participants, around distributive justice, choosing between sick patients, managing fear and uncertainty, dealing with families of dying patients and compassionate leadership. The nature of online meetings allows participants from far and wide to join, without barriers of cost, travel, or losing time on the road. It has become a new way of creating a safe space, without walls, to share. Obviously, these meetings are not recorded.

9.   COVID-19 Innovations for the UKWANDA Dietetics Rotation

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The Ukwanda rotation is a 6-week integrated community-based rotation for final year dietetic students from the Faculty of Medicine and Health Sciences, Department of Global Health, Stellenbosch University. The purpose of the programme is to expose students to the three fields of dietetics (community nutrition, therapeutic nutrition and food service management) integrated into practice, to equip students better to work effectively in the South African public health context. The programme was initiated in 2012 and takes place on one of two rural training platforms located in Worcester and Hermanus.

Due to the Covid-19 pandemic and subsequent restrictions, the Worcester and Hermanus training platforms could not be accessed. The Ukwanda rotation was shortened to a 5-week rotation, of which three became online weeks, and two weeks were facilitated at different locations where the non-governmental organization (NGO), Sprouting Minds, is involved (Durbanville, Klipheuwel and Fisantekraal area).

The intended learning outcomes, teaching/learning opportunities and assessments for the original Ukwanda programme is based on the principle of constructive alignment. To keep the rotation student-centred and relevant, this remained the basis for the adapted Ukwanda rotation. While keeping the original outcomes in mind, most of the summative assessments were conducted during the online phase while the practical phase mainly used formative assessment opportunities. Learning opportunities during the practical phase are complementary to the learning opportunities of the online phase.

The programme was adapted for Covid-19 nutrition specific responses e.g. developing, preparing and evaluating a soup recipe at a community-based organisation (CBO), compiling guidelines for emergency food parcels and packing food parcels. Students also attended webinars regarding relevant nutrition topics. This allowed them exposure to national and international role players from different sectors and disciplines highlighting a more integrated approach to health and nutrition.

Looking to the future, it is clear that health and nutrition education should continue in a practical setting at grassroots level, close to people and communities. These new circumstances have highlighted the opportunities for students to gain a much deeper experience in practical integrated health care and to engage with a much broader scope of platforms offered by NGOs and CBOs. The rotation allowed students to develop the graduate attributes of professional, communicator and an engaging citizen in a resource limited setting. From students' feedback and reflection after the first rotation, it is clear that the intended outcomes were reached and that students experienced the learning opportunities as valuable.

> *"Ukwanda 2020 might have changed its location due to the pandemic, but the experience was not compromised! As a future dietitian and as an individual I have gained precious knowledge and practical skills which is lifelong."* Student A

> *"I thoroughly enjoyed this Ukwanda block and all it had to offer. It was unfortunate that we did not get to have the full experience however I still learnt a lot from the online approach. This block not only covered the theory side of our degree, but it also included practical elements which incorporated personal development and growth making it a favourable block for me."* Student B

10. What will we do differently in teaching and learning as a result of COVID-19?

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Due to the sudden onset of the COVID-19 pandemic, many drastic changes had to be implemented in teaching and learning at Institutes of Higher Education globally and within South Africa. This drastic transition from classroom-based to remote teaching and learning, has posed many challenges for academics and students alike, with studies (Maslen, 2020) indicating that students from disadvantaged backgrounds are impacted the most. These challenges faced by disadvantaged students are primarily related to, i) material deficits (resources in the form of laptops, internet access, poor network coverage) and, ii) skills deficits (digital and self-management/coping skills) (Maslen, 2020) which precludes them from being able to attend and actively engage with virtual lecture sessions, and complete online assessments. Undergraduate students from a previously disadvantaged institution such as Cape Peninsula University of Technology (CPUT), have experienced both material and skills deficits as a result of this forced transition into remote learning.

In view of these challenges, we suggest that in order to address the material deficit, it should be mandatory for all students entering undergraduate programmes to have a laptop. Should the student not own a laptop, then such a student should be issued with a laptop, the cost of which can be debited to the students account and be paid off over the course duration. In addition to this, teaching and learning material should be disseminated on all platforms such as WhatsApp, email, Blackboard and G-drive in an attempt to mitigate the some of the accessibility challenges students experience accessing T&L material.

To address the skills deficit, all undergraduate students (1st, 2nd, 3rd and 4th year) need to periodically attend training sessions on the use of the current online teaching platform (e.g. Blackboard).

Furthermore, academics may also be inexperienced and ill-equipped to deal with transitioning to remote T &L techniques (Maslen, 2020), over and above their normal academic workload (Gillett-Swan, 2017). To this end, academics should also periodically update their digital skills.

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11.   Hosting a virtual world café to promote interprofessional learning

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A virtual environment may be a feasible learning platform for bringing together students from different health care and social science professions to enhance their understanding of collaborative patient/client care and knowledge of other health care professions (Tufts University, 2019). Online delivery has enormous potential to solve many of the logistical barriers associated with an interprofessional education (IPE) curriculum.

In collaboration with the Faculty of Medicine and Health Sciences of Stellenbosch University (SU), the Interprofessional Education Unit at the University of the Western Cape (UWC) hosted a 3-hour virtual interprofessional world café. The world café methodology is a learning strategy aimed at promoting skills and knowledge to promote integrated and holistic care (Filies, Yassin & Frantz, 2016). The virtual world café participants consisted of fifty-seven undergraduate health and social science students from the two universities, which represented disciplines from dietetics and nutrition, biokinetics, physiotherapy, social work, natural medicine, and medicine.

Using the Google Meet video communication platform, a team of interprofessional facilitators collaboratively developed the learning resources and online platform. To circumvent data costs; iKamva, which is UWC's Learning Management System (LMS), was used due to the zero-rated provision for both SU and UWC students. To develop an understanding of the importance of interprofessional group work, an introductory video and a narrated PowerPoint were presented to the students. Students were encouraged to use the chat room for engagement and interaction with peers. This tool was used to share interesting stories about themselves, their profession. It was also used a socialization tool which allowed students to get to know one another and to build rapport with peers and facilitators. Students were divided into four breakaway groups using discussion forums to share stories and explore stereotypes related to their disciplines. This was an important activity as it brought about an awareness of the students' own role, and encouraged a willingness to understand and value the role of others (Limoges & Jagos, 2016).

A case study was used to facilitate discussion between students which allowed them to practice IP Communication skills, explore roles among the different professions and practice collaborative leadership skills. Each group was allocated a component of the comprehensive primary health care framework namely, curative, rehabilitative, promotive and preventative. Group members discussed interprofessional interventions which they deemed appropriate to their case study. Students and facilitators used the chatroom e-tool to share and discuss the various components and, based on the curated discussions, they developed a comprehensive intervention plan, as the outcome of the session. The SU lecturer used this outcome of the IPE World café for assessment purposes for their students and requested copies as well as transcripts of the discussion forum. Students were also able to access all intervention plans completed by other groups.

A student evaluation was shared via Google Forms to evaluate their experiences with the virtual world café. Students expressed that the world café strategy promoted an understanding of interprofessional learning. However, the LMS was not best suited for synchronous activity, as iKamva is not a real-time platform. To this end, students needed to refresh their screens to see new messages from other students and facilitators. Students viewed the iKamva platform as a barrier to the smooth execution of the virtual world café:

Students understood the benefits of this approach to promote interprofessional learning. They had however expressed that a virtual world café needed a conferencing or livestream application. Suggestions for future applications included Zoom, Hangouts and Big Blue Button. A zero-rated application or platform that allows real-time interaction is needed to execute a virtual world café effectively.

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12. Emotional Intelligence Component to Cope with Change in Healthcare Programmes

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Crisis is a sign that change is imminent. As South African academics, we were honestly not prepared for such a sudden and complete shift to online teaching or frankly speaking, emergency online teaching. Due to necessity, academics have learned new skills and developed innovative teaching strategies to facilitate learning for all students.

Success in the current online learning environment is subject to students' access to electronic devices, data and competence in using institutional software developed for online facilitation. Smartphones can be used to access learning content but are not appropriate for assessment. Institutions of Higher Education are involved in ongoing interventions to ensure equal and fair access to devices and connectivity for all students. However, fulfilling this task is like hitting a moving target for various reasons such as funding, procurement and distribution. Thus, health education academics should focus their energy on preparing students for an extended period of frustration, doubt and challenging online or face to face learning environments.

Considering the above, we propose the inclusion of a structured Emotional Intelligence (EI) component in our existing healthcare programmes to address student-centred learning through the development of self-actualisation, self-discipline and self-governance. Studies show a remarkable link between emotional intelligence (EI), mastering critical life skills such as decision-making and achieving academic success (Cherry, 2018). The proposed EI component should be the focus of teaching strategies in our core curriculum for the first month of each academic year for maximum effect (Stoller, Taylor and Farver, 2013). This component should also be scaffolded through from the first to exit level year, to ensure continued growth in EI (Stoller, Taylor and Farver, 2013). We further suggest that the EI component be delivered online using the same online teaching platform employed for facilitating all other online module content (Majeski, Stover, Valais and Ronch, 2017).

Majeski, Stover, Valais and Ronch (2017) advises that such an EI component should include aspects such as emotional self-control, conflict management, teamwork and cultural awareness. As noted from these aspects, an interdisciplinary team is suggested that includes a psychologist, profession-specific academic and an industry representative. The psychologist will be able to teach the EI aspects to students, but it is the profession-specific academic and industry representative that will convert these taught EI aspects into principles that students can apply in their daily study and practice of a profession.

As academics, we trust that through this EI component we can cultivate a student culture of "becoming the best healthcare practitioner possible with the limited resources I have" and to change their mind-set when they learn. EI will support students in structuring their own long-term goals and will grow self-governance. In the current context, we cannot ensure that each student has the technological devices and connection for academic success, but we can ensure that they are EI enough to work around their challenges for their academic resilience, benefit and success.

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13.   Attention allocation in an age of distraction

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You would think that academics would have welcomed the opportunity to work remotely and with the kind of flexibility enforced by the pandemic. After all, we don't produce widgets on an assembly line, serve customers, or build roads. We don't always need to be "at work" because the work we do is often in our heads. So why did so many academics struggle with the transition to flexible and remote working environments during the lockdown? Of course there are many reasons but I'll focus on only one; the unanticipated consequences of a move from synchronous to asynchronous work.

Between housework, homework and "real" work[2], we soon recognised that work during the pandemic would have to happen whenever you found space for it to happen and not because it was 08:30 on a Monday. It was difficult for everyone to be available during "office hours" because everyone had different office hours, so we had to move from a default expectation that everyone is "at work" from Mon-Fri, 09:00-17:00 (synchronous work) to a new default where people would work when it suited them (asynchronous work). The practical implication of this is that we should have changed the assumption from *everyone* is available right now (because it's 08:30 on a Monday) to one where *no-one* is available.

But one of the biggest mistakes people make when transitioning to asynchronous work is that it effectively creates a culture of being "always on". On top of this many faculty teams seem to have moved their departmental operations onto real-time communication platforms (e.g. WhatsApp, MS Teams, Slack, etc.). The low attentional cost of sending messages in these platforms meant that we were sending messages all the time, without recognising that the real cost is paid by the receiver who had to constantly switch attention between whatever task they were busy with and the message that you just sent.

The feeling of being "always on" was a result of the fact that many academics switched to an asynchronous operational timetable (they were working whenever they could find the time), while also switching to synchronous communication platforms. The result was that there was no down-time for anyone. This attempt to port the office working environment and norms surrounding it, to a remote working context created a constant background noise of low-level anxiety. We were disconnected from work because we were "supposed" to be with our children, and disconnected from our children because we were "supposed" to be working". It was the worst of both worlds.

We mistook *important* for *urgent* and created a culture where everyone was available, all the time, reacting to everything in real-time but all the while unable to focus on any task for a meaningful period. Instead of slowing down to reflect on the implications of important decisions we tried to go faster. To get more done in what felt like less time. Together with the feeling that everyone else was working all the time (because of different and overlapping schedules) it started to feel like "work" was the default mode of our existence. We were always on. We didn't slow down to think carefully. We didn't give each other space.

As knowledge workers, one of the lessons we need to learn from the pandemic is that we have to control how we allocate our attention, how we ask for the attention of our colleagues, and that the first step towards achieving this is to change our mindsets around synchronous and asynchronous work. Attention management is an essential skill if we want to do our best work, and the first step is to protect it from a bizarre lottery system that awards our attention to whoever happens to message you first.

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[2]   The distinction between what "counts" as academic work is, of course, a topic that needs closer and more critical attention but which is beyond the scope of this short piece.

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14.   A pandemic initiated revised CPT IV module: A roadmap for the future

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> *"Learning in a clinical context is foundational in the training of health professionals; there is simply no alternative"* (Nordquist et al., 2019).

What to do when the clinical context rapidly transforms? Redeployment of the health workforce, suspension of "non-essential" health services and de-escalation of care for patients with chronic conditions outlines the changing nature of health services during the pandemic that directly impacts physiotherapy services. Clinical training should be responsive to local healthcare needs in order to promote learning and complement service delivery (van Schalkwyk et al., 2019). To align with this new reality, we reframed clinical learning opportunities, student support strategies and assessment.

The challenge in adapting clinical learning opportunities was to balance responsiveness to emerging opportunities on the "new" clinical training platform, whilst graduating clinically competent entry-level physiotherapists. Pre-COVID, physiotherapy students trained in the traditional rotation-based model, completing short rotations across four core disciplines: neurological-; neuro-musculoskeletal -; medical and surgical - and community based rehabilitation. Consultative processes with clinicians directly impacted by the pandemic, revealed that continuing with this approach would not be feasible. We adopted "the curriculum is the patient that walks through the door" approach and engaged anew with clinicians, recognising this approach included uncertainty toward available clinical learning afforded to students. We revisited the core competencies for entry-level physiotherapists and developed a "MasterPlan" aligned with HPCSA recommendations. Furthermore, we introduced a clinical referral pathway mobile application, VULA, to track student exposures on the platform and map this in relation to the "MasterPlan". This process helps us to develop supplementary clinical learning activities to address unattained exposures and engages students in their own learning. Supplementary activities have included student-led remote case management discussions and virtual home visits. The adaptation of the clinical learning model resulted in alternative student support strategies to shift the burden away from clinicians. Students are remotely supported by a mentor whose focus is to assist the student in planning their learning in a focussed, self-directed way to achieve the "MasterPlan". Site supervisors continue providing direct supervision at the patient's bedside whilst academic experts facilitate case-based learning through remote communication using VULA.

Finally, to ensure constructive alignment between learning opportunities and assessment, case-based management discussions (CBDs) will be used in addition to direct observation clinical evaluations tests. CBDs assess the student's competence to manage care comprehensively through the continuum as well as the development of graduate attributes. We have learnt important lessons during this time and for future practice: the value of collaboration and transparent communication between stakeholders when navigating a crisis; responsiveness to the changed platform and dynamic environment and aligning teaching with current healthcare needs. Additionally the need to set explicit goals, enforce purpose toward learning opportunities and provision of adequate support to students. During online remote teaching sessions we learnt the importance of clarifying concepts, the value of process over product and valuing relationships.

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15. Assessment really must be *for* learning.

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I find the term "emergency remote teaching", or even emergency remote teaching *and* learning, to be very telling, for, once again, assessment is largely treated as an afterthought. As "assessment drives learning", it should therefore direct the design of curriculum, and all teaching and learning activities.

COVID-19 has forced our hand as educators, to rethink how we do assessment (online). We should make the most of this important opportunity to critique the validity of our assessment practices and make powerful changes for the future:

- Instead of treating assessment as a "tick-the-box" activity, educators should prioritise their assessment practices by investing time and energy into the careful crafting of questions, aligning of learning outcomes, graduate attributes, assessment purpose and assessment instruments used.
- Instead of worrying about the possibility of cheating in online assessments, educators should be asking if their assessments are valid and reliable.
- Instead of solely focusing on summative outcomes, educators should prioritise formative assessment, holistically supporting their students and providing timeous, detailed feedback with additional opportunities to put their learning into action. UCT promised no academic exclusions and UWC proclaimed, "Leave no student behind", but has this honestly been integrated into assessment practices during this time of crisis?
- Instead of setting time limits for the completion of assessments, educators should be empathetic and flexible, possibly allowing for multiple submissions, if learning and student success really are the goal.
- Instead of ordering students to sign honour pledges and anti-plagiarism declarations (a punitive approach), educators should be building trust and responsibility in their students, which would serve them well for future ethical professional practice (a pedagogical approach). Academic integrity should be central both on and offline. Moreover, if students cheat, instead of immediately punishing students, we should ask, "Why?" and how we can better support them.

In reflecting on observing poor face-to-face assessment practices translated into poor online assessment practice, educators have not only missed an opportunity to enhance student learning, but they have also reinforced undesirable learning behaviours in students. Furthermore, in Health Professions Education (HPE), poor assessment practice has serious consequences in terms of declaring future healthcare workers as competent and safe for public practice. Therefore, it needs to be done carefully and intentionally. Going forward, HPE assessment needs to be critiqued, better aligned and prioritised.

16.   Utilising video for a physics module during COVID-19 to adhere to social distancing.

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The academic project had to continue for the final year radiography students to complete the required attendance in clinical practice. The students were instructed in previous years to demonstrate to the class, quality control tests of diagnostic x-ray machines. Due to the institutions' social distancing guidelines, the assignment could not be executed due to the limiting of student numbers per venue.

Students were instructed to create a video of the content, in groups of no more than 8, and to submit the edited final version on the Blackboard platform. The x-ray room on campus was available for bookings, considering the sanitizing of the venue between the visits of groups.

All the final year students (n=58) participated in the assignment, even those in self- isolation contributed remotely. The assignment on video shaped the way forward, masks and all! One of the groups executed the assignment in an x-ray room at a hospital with their Personal Protective Equipment clearly visible on the video.

The post assignment questionnaire indicated that students were very satisfied (45%) or satisfied (36%) with the group participation. The majority (91%) did not experience challenges with the software to record the video. Most made use of the video applications on their cell phones. The challenge was to submit without data (45%), but the assignment due date was flexible to allow students the opportunity to submit once they had access to Wifi. Lessons learned were that if the video size was larger than 100 MB, it could not be uploaded on WhatsApp but had to be compressed before upload on Blackboard.

The lecturer instructed students in the post survey, to describe what they have learned about the tests. The responses are proof that the outcomes were achieved. The accuracy and care to research the facts of the quality tests were evident during evaluation of the projects. The effectiveness of the videos as a learning tool is confirmed by 90% of the students' remarks such as, "It's easier to comprehend all the tests when they are demonstrated by peers using a relatable language" and "This gave us a chance as students to actually do our own tests and also to learn the need for these tests." One student indicated that the added details and written instructions on the video is much easier to remember than just being explained in class without a video, especially since a student can watch it again.

In these extraordinary times, lecturers and students are standing tall to adapt and to build a new scholarship that is kind and flexible towards students unable to attend due to quarantine or travel restrictions. The effectiveness of the project to engage students not only in new technology, but also to communicate the essence of the learning unit content in a limited duration of 10 minutes will be taken forward.

17.   Adapting team based learning for practical curricula

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What happened?

In response to the changes in health service delivery, health professions education has adopted various strategies to adequately prepare students. Team-based learning (TBL) is a learning and teaching strategy that focuses on three units of instruction (Dearnley *et al.* 2018): i) pre-readings and other study materials are developed as preparation for students, ii) students complete individual readiness assessments, which ensures understanding of the content, and iii) students complete the same assessment in their team to ensure team readiness and understanding. The South African government has implemented social distancing to reduce the spread of COVID-19. Practising social distancing has however impacted learners, lectures and the classroom environment, thus posing a potential threat to the educational process in its entirety (Rose, 2020). In health professions education at the University of the Western Cape, the sustained use of TBL was achieved through applications including Zoom, Google Meet, Microsoft Teams, and zero-rated platforms. Pre-readings were shared in resources folders of a zero-rated platform for UWC students called iKamva. Individual tests were completed on Google Forms, and the *tests and quizzes* e-tool on iKamva. Groups interacted using iKamva, email, WhatsApp and other forms of social media. Therefore virtual TBL approach was chosen as it allowed student and staff interaction and participation even during isolation or quarantine.

Based on your own reflections, what is the take home message?

Virtual TBL has exposed module content challenges related to the practical components of health professions courses and modules. A gap thus remains in the transition from theory to practical application. As the curricula continue, students are grappling with the application of assessment techniques, hand placements and bedside exposure needed for clinical practice. Using virtual TBL, these gaps can be mitigated and applied to practical learning and teaching. It is important to note that including a practical component into the virtual TBL will not replace any practical sessions or clinical practice. It is merely aimed at facilitating the learner's engagement with the practical components of their coursework. Essentially, this reflection aims to combine the online platform and practical sessions to achieve team based learning in an adapted E-Practical Classroom. Below (figure one) is the step of which virtual Team-based learning was used.
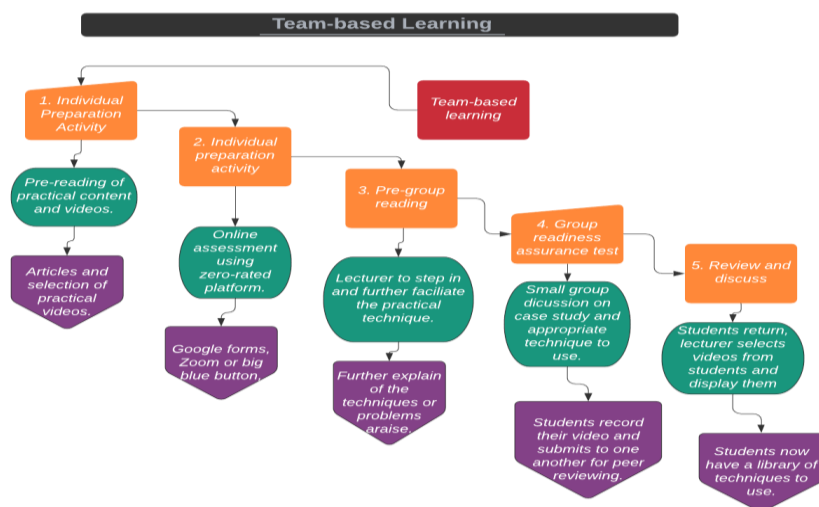

Figure one: Team-based learning

What were the lessons learnt?

TBL is not a new concept of teaching and learning, but to mitigate the gap for practical learning in a virtual space, this adapted concept of TBL may work well. These proposed changes to TBL are imperative steps in ensuring successful practical teaching and learning. Despite the impact of COVID-19, based on the proposed adaptations to the TBL method, students will not be disadvantaged. Should students/staff test positive for the virus, the learning and teaching can continue without interruption or delay. The virtual TBL was done using case studies, students will not learn the technique in isolation but through an intervention approach to a patient's problem. This is a recommendation to mitigate the challenges posed by the virus, and overcome the limitations of virtual practical teaching and learning.

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