

An evidence-based approach to **learning and teaching** during the 2020 COVID-19 pandemic

Dr Subethra Pather, Dr Vanessa Brown and Prof Vivienne Lawack



Deserted lecture spaces at UWC

On 5 March 2020, South Africa's Health Minister confirmed that the first case of Covid-19 had been detected in the country and on 15 March the President announced a national state of disaster, followed by various measures including the closure of schools on 18 March. On 17 March 2020, the Minister of Higher Education announced that universities would close until 15 April 2020 for early recess. At this time the Minister also instructed higher education institutions to begin preparations for online teaching and learning that "may need to be put in place to support the academic programme at a later stage". Following his announcement, most universities announced their intention to switch to Emergency Remote Teaching and Learning (ERTL) on 16 April 2020.

The unprecedented lockdown due to the Covid-19 pandemic resulted in universities transitioning in a rushed manner from their normal face-to-face mode of instruction to ERTL. This resulted in a decisive action being taken among institutional leaders as they tried to grapple with the sudden change. In order for the institutional leadership to develop a strategy that was holistic, resilient, equitable and student-centered, it was imperative that evidence-based support be offered to staff and students to engage with online teaching and learning.

An evidence-based decision approach encouraged the University of the Western Cape's (UWC) leadership to rely on available evidence,

analyses, and facts to develop university guidelines for learning, teaching and assessments during a time of crisis. The objective was to ensure that university leadership did not take for granted the resource disparities that exist, not only among the student population but also among university academics. Evidence was gathered from students and staff in two stages. As a first step data collected related to resource readiness to engage online in ERTL, and later in the semester data was collected on staff and students' personal experiences with ERTL during the pandemic. The collection of data at the different stages allowed UWC to provide evidence-based plans and support to staff and students in a staggered manner to ensure relevance as we were dealing with the "unknown".

Understanding students' resource readiness for online learning engagement

The first university survey was administered within 48 hours of the announcement of the national lockdown. The immediate response by university leadership was to determine students' resource readiness for online engagement and how best the university could support its diverse student population. The survey was administered online to the entire student population of the university ($N = 23,788$). The following indicators were probed in the survey:

Device ownership and device capability to connect to a network

The results indicated that almost all respondents (98.8%) either own or have access to a device. The majority of the students (92.9%) own a smartphone. A small minority (1.2%) do not own any device, whereas 69.6% of students reported that they own a laptop, 8% own a desktop, and 7% own a tablet. Yet 15.7% of the respondents indicated that their devices were not capable of connecting to the internet.

Device preference

Although most students owned a mobile phone, only 23.4% of students preferred to use a mobile phone for online learning activities. A laptop was preferred for online learning by 70.0% of respondents. The previous question indicates that 69.6% of respondents do own or have regular access to a laptop, which indicates that about 30% of students would face difficulties in many online learning tasks.

Internet access

Just over half of the students (56%) indicated having access to an internet connection at home. This indicates that 43.9% of students would have no access to online learning materials and platforms.

Affordability

With regard to affordable access to the internet on a daily basis, 51% of the students indicated that they are not able to afford access to the internet with their preferred devices.

Conducive environment

In this question of the survey we asked students if they had an appropriate place that is safe and relatively private and quiet in which they could engage in academic activities when off-campus. A total of 73.7% of students affirmed that they have a conducive home environment to work from.

Confidence to engage online

Our concern in asking this question was whether the average student was prepared for the dramatic shift from face-to-face tuition to that of remote online learning. As such, this question queried students' confidence in engaging in online learning during the lockdown period. Only 36% of students were confident that they could continue to learn online during the crisis. The majority of students (41%) did not feel confident, given their lack of resources.

The results of this initial survey given to students at the start of the lockdown provided a basis on which the university leadership was able to frame a business continuity response. In particular, the evidence captured informed how the academic project would be adjusted to take into account the realities of the pandemic and the students' environments. The findings brought to the fore several issues that were pivotal in how the university organised itself during the period of lockdown.

Understanding student and staff resource needs: data and findings

Late in March 2020, UWC conducted a second survey as a follow-up to gain information on students' needs for data and device resources to engage in online learning. The Data and Devices Survey sought to determine the numbers of students who would need laptops and data to be provided to them by the university. A total of 7 699 students responded, requesting devices and/or data. Of this number, 60% were National Student Financial Aid Scheme (NSFAS) students.

The university provided 5 691 laptops to students by mid-September and provided data bundles to 14 748 students in July, 13 544 in August and 13 962 in September. Hence, data bundles were provided to 58% of the University's students and laptops to 28% of students. UWC reported that all who had requested a laptop had received one by the end of September.

Understanding student success: data and findings

On 23 October 2020, the Department of Higher Education and Training (DHET) presented a briefing to the parliamentary portfolio committee on Higher Education, Science and Technology on "Steps Taken Towards Successful Completion of the 2020 Academic Year". In this briefing, the DHET indicated that an average of 7% of students across the sector were reported by universities as not fully engaged, and this ranged from 0% to 29%. The DHET reported that for UWC this percentage was 8%. UWC's internal data for students' participation in online assessment in the first semester confirmed that 8% did not participate online at all, whereas about 22% did not participate fully in online learning.

In August 2020, the DHET commissioned a national survey, Student Access to and Use of Learning Material (SAULM), which was a comprehensive survey of the quality of student engagement in online learning during the pandemic, their access to the resources required for participation in online learning as well as their level of technological skills and knowledge required to navigate e-learning. A total of 1 335 students from UWC participated in the SAULM survey, and 104 (or 7.8% of UWC respondents) indicated that they could not access learning materials remotely.

UWC data from the SAULM study and our own UWC survey on student and staff experiences of online teaching and learning during the pandemic demonstrated the following positive and challenging experiences for both students and academic staff.

Students' positive experiences

- Allowed for creativity and flexibility
- Increased motivation to work harder
- Encouraged more collaboration with peers
- Learnt new skills to engage in online learning
- Lockdown allowed for more focused engagement in academic work

Students' challenges

Infrastructure and resources

- Lack of resources (costs of mobile data, suitable devices and electricity)
- Lack of adequate infrastructure (load-shedding and unstable connectivity)
- Absence of a multifaceted support ecosystem provided by "campus life"
- Lack of conducive "home" environments, and pressure from multiple obligations

Readiness for online learning

- Lack of technical know-how (lack of digital literacy; unfamiliarity with the Learning Management System and other platforms)
- Unfamiliarity with learning styles suited to online environment (self-study; time management skills)
- Reliance on physical presence of lecturers, tutors and peers for consultations

Curriculum issues

- Lack of timeous communication and adequate feedback from lecturers and tutors
- Inadequate online provision, explanations of content, etc
- An escalation in workload, lack of coordination in faculties around assessment due dates
- Inconsistent use by lecturers and tutors of "data-lite" approaches

Academic staff: positive experiences

- New skills and teaching and learning strategies were learnt
- Allowed for creativity and flexibility in teaching

- Connectedness with students, increased engagement
- Built communities of practice: sharing of ideas and practices

Academic staff: Challenges

- Concerns about the quality (legitimacy and credibility) of assessments
- Rushed redesign of curriculum for an online context
- Some academics also experienced challenges related to infrastructure and resources
- Some expressed concerns related to their readiness for online delivery
- Boundaries – no defined work hours
- Balance between personal and professional responsibilities

Assessment principles: informed by the data and context

Changing UWC's assessment plan in a decisive manner once already distributed to students, because of the Covid-19 pandemic, was an exceptional situation. UWC's online assessment criteria took into account the three Is: integrity, inclusivity and immediacy. Care and compassion were at the core of the assessment guideline principles, which centred on these principles:

- "No student will be excluded from a final assessment on academic or any other grounds."
- "After the period of lockdown students prejudiced due to lack of access to an environment conducive to learning and/or the required resources will be provided with additional assessment opportunities."
- "Assessment must be of a high standard, subject to normal internal and external moderation, and authentic and credible."

Guidelines for blended learning and teaching for 2021

The evidence-based approach followed at UWC in 2020 provided us with the opportunity to proceed from a principled basis. All decisions with regards to moving the academic programme online in 2020 followed proper protocols through the institution's governance structures of the Senate Executive Committee (SEC), Senate Academic Planning (SAP) and Senate.

The proposed blended learning and teaching approach for 2021 takes into account the continued risk to public health posed by Covid-19. Hence, the development of guidelines for blended learning and teaching propose a framework for proceeding with the 2021 academic year that considers the public health concerns, as well as the evidence-based learnings arising out of UWC's experience with online learning in 2020.

Although the majority of UWC students engaged in online learning in 2020, many did so under difficult circumstances. The data we collected shows that 8% of our students did not participate in online learning at all, whereas about 22% only partially participated in online learning. The development of UWC's blended approach guidelines allows for a wider and more inclusive approach to student participation because it allows students to learn in digital and online media as well as traditional face-to-face teaching. This approach can also include a range of technologies and the deployment of both physical and virtual resources to suit different purposes, learners and context.

Blended learning provides the opportunity for students to be provided with some face-to-face teaching opportunities to facilitate their transition to university and to online learning, and provides them with some physical contact with lecturers, which was not possible during the 2020 academic programme. The guidelines make provision for campus resources to be available to residence and commuting students irrespective of the particular programme approach to blended learning. The realities of infrastructure and resource challenges experienced during 2020 would be addressed for the 2021 blended learning and teaching approach.

Concluding Remarks

This article illustrates how following an evidence-based approach to learning and teaching during the Covid-19 pandemic enabled UWC to take decisive action on a principled basis. This ensured that the policies, guidelines and decisions were informed by an understanding of the vulnerabilities and challenges faced by staff and students during this time. The data also showed that UWC staff and students were strongly committed to completing the academic year successfully, thereby demonstrating incredible resilience in the face of the upheavals and trauma unleashed by the Covid-19 pandemic. Although there were challenges for both students and academics, the experience has also provided insight into the future positioning of flexible learning and teaching at UWC in years to come.

Dr Subethra Pather is the Acting Director of Learning, Teaching & Student Success in the office of the Deputy Vice-Chancellor: Academic

Dr Vanessa Brown is the Director of Academic Planning Unit in the office of the Deputy Vice-Chancellor: Academic

Prof Vivienne Lawack is UWC's Deputy Vice-Chancellor: Academic

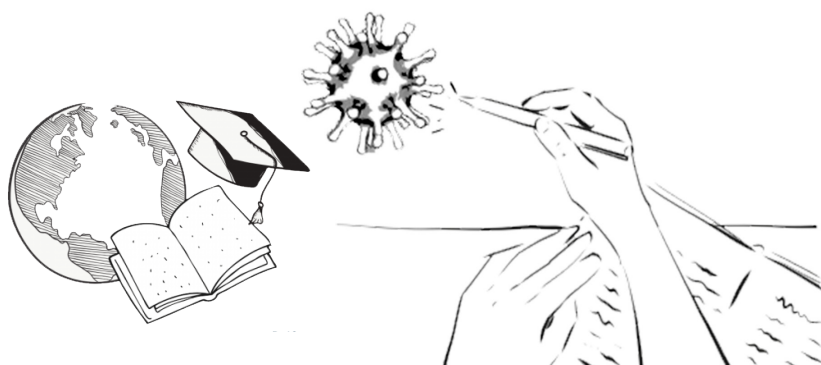




Image: United Nations poster