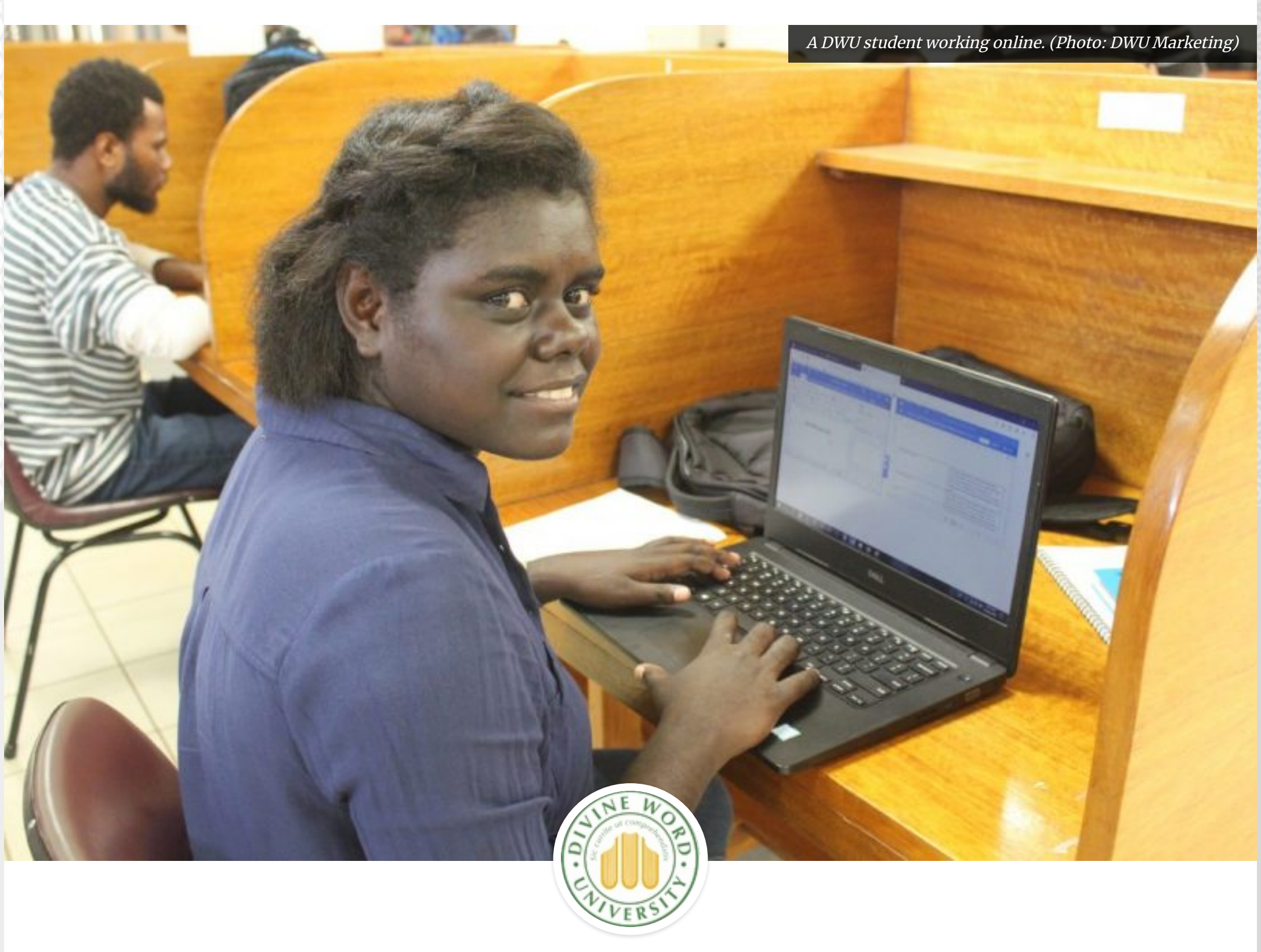
Increasing blended and online learning in PNG universities: the DWU experience

by DWU Teaching Staff · May 20, 2020



A DWU student working online. (Photo: DWU Marketing)

As the world adjusts to the health and economic impacts of COVID-19, commentaries are being written on the circumstances and responses of specific countries. In regard to Papua New Guinea (PNG), the narrative is largely negative, with headlines such as, 'We have nothing': Papua New Guinea's broken health systems brace for COVID-19 and Coronavirus could see Papua New Guinea, Indonesia become failed states. Missing in these analyses is attention to the creative possibilities that often emerge in response to change and uncertainty.

The higher education sector in PNG is one of many required to develop innovative strategies that limit face-to-face contact and adhere to social-distancing restrictions. This blog post documents the experiences of a team of lecturers at PNG's Divine Word University (DWU), as they move to increased use of blended and online learning.

As a response to the impacts of COVID-19 on DWU's academic calendar, some lecturers are attempting to deliver units fully online by distance for the first time, in addition to the university's existing blended learning programs. While undergraduates living on campus have resumed classes, repeated in smaller class sizes, blended learning students from other provinces are currently unable to travel to the University's main campus in Madang without undertaking a two-week quarantine. University staff are uncertain about the number of prospective students who will be able to engage in blended learning programs in 2020 due to technological challenges that pre-date COVID-19. DWU students living outside of town centres do not always have reliable access to the internet, and internet prices in PNG are among the highest in the world. While recognising the many challenges, the authors see the social distancing restrictions as an important opportunity to advance the use of technology in higher education in PNG.

The challenges identified are likely to be familiar to academics in high-income countries such as Australia. Yet there are a number of limitations that make the PNG context unique. Bandwidth limits and lack of paid subscriptions to online platforms mean that it is impractical to deliver lectures via video broadcast. A one-hour Zoom meeting, for example, would consume a significant portion of a lecturer's daily data limit. Most lecturers therefore rely on Moodle, an Online Learning Management System, to share learning resources and facilitate student discussion via e-forums and chat. Social distancing restrictions are increasing the use of Moodle and also re-invigorating attention on the capabilities needed to support effective blended and online learning.

The shift to blended and online learning is not without consequence on student experience. Humans are relational beings and harmonious relationships are an important feature of social life in PNG. Communication between teachers and students via a computer can affect the quality of the relationship and contribute to a sense of isolation among students. Maintaining student attention and engagement via a small screen is difficult. Contribution to discussion forums, especially when not linked to grades, can be poor. Most students also have multiple responsibilities, such as family and employment, and they do not always the have the time management skills to balance these effectively. A strength of online learning however, is that it challenges students to change from passive listening to active participation. It calls for the adoption of new teaching strategies that facilitate student-centred learning. Yet it takes time and effective training for academic staff to learn new technological and pedagogical skills. Facilitating online activities is also time-consuming for academic staff that hold a range of competing responsibilities, and for whom use of technology can be perceived as an additional task.

Student feedback points to the strengths and weaknesses of blended and online learning. Some students say that it is more difficult to understand technical and complex concepts (e.g. the calculation of binary codes in Information Systems units) in the absence of face-to-face interactions with lecturers and classmates. Lecturers also observe limitations in the basic academic skills of students (e.g. note-taking and identifying key components of academic texts). This adds further challenges to moving content online, which given bandwidth and data limitations, can rely heavily on text-based resources. A key strength of online learning noted by students, however, is that it is convenient, and students can more easily work at their own pace and according to their particular circumstances. Yet this can also be problematic because in many instances, lecturers find that assessment tasks are not submitted on time.

The need to adapt to social distancing restrictions at DWU has highlighted genuine eagerness among staff to learn new technological skills to meet a range of learning needs. Staff attendance at workshops on tools such as Active Presenter have exceeded capacity. Staff are also engaging in skills-sharing at a more individual level, offering assistance on hosting Zoom meetings and recording PowerPoint presentations. There is a further opportunity to learn from lecturers at other universities in PNG, to learn how they are responding to similar circumstances and limitations.

In regard to the technological opportunities, it is hoped that the Coral Sea Cable System linking Sydney to Port Moresby will provide faster, cheaper and more reliable communications infrastructure to PNG, including increased bandwidth for DWU's regional campuses.

An important, yet currently untapped, idea to reduce internet expenses for students is to partner with internet service providers to support online learning. Internet service providers with a strong presence in PNG such as Digicel could provide students with access to digital learning resources freely or at reduced rates – a practice that has been adopted by telecommunication companies in Rwanda.

One function of the higher education sector as a social institution is to meet the needs of society through academic excellence and producing skilled human resources. The circumstances posed by COVID-19 have heightened the need for universities to respond to change – perhaps faster than current technological capabilities allow. The experience at DWU is showing, however, that academic staff within PNG's universities are eager to embrace change and to develop new competencies to support student learning. In the context of negative headlines concentrating on PNG's deficiencies, it is important that examples of creativity and adaptability that also characterise life in 'the land of the unexpected' are not diminished.

This post is part of the #COVID-19 and the Pacific series.

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J. David Cole
December 8, 2020 at 8:28 am

Thank you for this informative article. As a Research Affiliate at the Burk Museum, University of Washington, I am interested in installing small scale solar powered internet access capability in the PNG highlands as a way to involve landowners and stake holders in training and education related to research projects in Archaeology. It sounds like you are passionate about this subject and I will follow you the best I can to learn more.

Reply

Albert Schram
May 20, 2020 at 6:13 pm

An excellent overview of the DWU experience, thanks. The PNG University of Technology however is 3 times larger and UPNG 6 times larger than DWU, which creates different challenges but also opportunities.

My experience as PNGUoT's Vice Chancellor for 6 years sheds some lights on these online learning "constraints". These are not God-given but product of the socio-economic model PNGeans have chosen: crony filled SOEs unable to provide basic services, and politicized university councils, populated by people who do not understand higher education nor technology.

In 2012, after 10 years the undersea cable in Madang had finally been connected. Lack of maintenance, however, meant the connection was always interrupted. The cable was literally dangling in the waves in the light house area. DWU was able to get by with a clever combination of cable, and geo-stationary satellite.

Located in Lae, however, the PNGUoT was faced with a greater challenge. Due to landowner digging up the fibre cable between Madang and Lae, the cable was above ground, run over the power lines. As a result, when faced with an interruption, Telikom had to convince PNG Power to give it permission to access the power lines. This would take weeks. In addition, Telikom had no credible plan to build redundancy into its network by linking Lae to Port Moresby.

For all these reasons, PNGUoT had to find a different solution. I convinced the Council to invest almost K1,5M of operational savings I had achieved, in building an earth stations for the O3B non-geo-stationary satellite system. We requested and received almost K1M to upgrade the Wifi network from PIP funding. Though initially monthly rates were high, I was able to negotiate down the price with O3B, who were willing to match price reductions given to other PNG customers. O3B access was always intended as a temporary measure, until low-cost and reliable fibre access would be available, which may or may not happen in 2021.

Moreover, we used the PNG R-Net experience to procure Dell laptops internationally and sell them to all 1st year students at 50% discount. Later, I negotiated a deal with a national Dell dealership so as to assure timely delivery at a competitive price. What good is internet if students have no devices?

This is how the PNGUoT became the second University after DWU to provide laptops for its students, and the first University in the world to have its own O3B installation providing free campus-wide Wifi to all students and staff: https://www.satellitetoday.com/telecom/2015/03/25/o3b-networks-signs-unitech-as-first-education-customer/

As a result, Google Classroom free Learning Management System (LMS) was quickly adopted. The main reason was that due to daily blackouts and lack of toner and paper, it was much more reliable to distribute teaching materials electronically. Moreover, the students had finally access to updated information for their assignments and projects, rather than rely on the historical collections of the decrepit Matheson Library. We started a graduate certificate on student-centred teaching, and the PVC Academic was in charge of assuring support for teaching through the LMS was put in place.

When late 2017, Peter O'Neill however appointed a new Chancellor and Council members, they decided O3B internet was "too expensive", and stopped negotiations with O3B and Dell suppliers. Instead, the installation was rented out to DataCo who used it to serve commercial customers in Lae. The result is that now PNGUoT students do not have access to free wifi, and need to pay for access through Digicel or Be-Mobile. It has been amazing to see how quickly things reverted to the situation before 2012 through short-sightedness and sheer stupidity of the heavily politicized University Council and management.

Regarding online learning, this is a global conversation now. Some want to make us believe a "pivot" to online learning can successfully be done in 2 week or 2 months. This is of course nonsense. First, the right conditions for zero-cost internet access, and right support services need to be in place.Secondly, Faculty must create modular courses based learning activities. Simply uploading powerpoint and video streaming their lectures is not enough. DataCo has stated it will be ready to distribute bandwidth from the new cable by Fall, so this year the PNGUoT will continue to face difficulties

UMGC, the University I work for now as professor, is one of the largest online top-20 colleges in the USA delivering usually hybrid course in over 300 centers across the world. When University administrators are done congratulations themselves on their online pivot, they should consider training Faculty and staff properly. Through EdX, UMGC offers an excellent certificate and micro-masters on instructional design and technology: https://www.edx.org/micromasters/usmx-umgc-instructional-design-technology. I received similar training for 3 months and it increased my effectiveness in online teaching dramatically. Highly recommended.

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