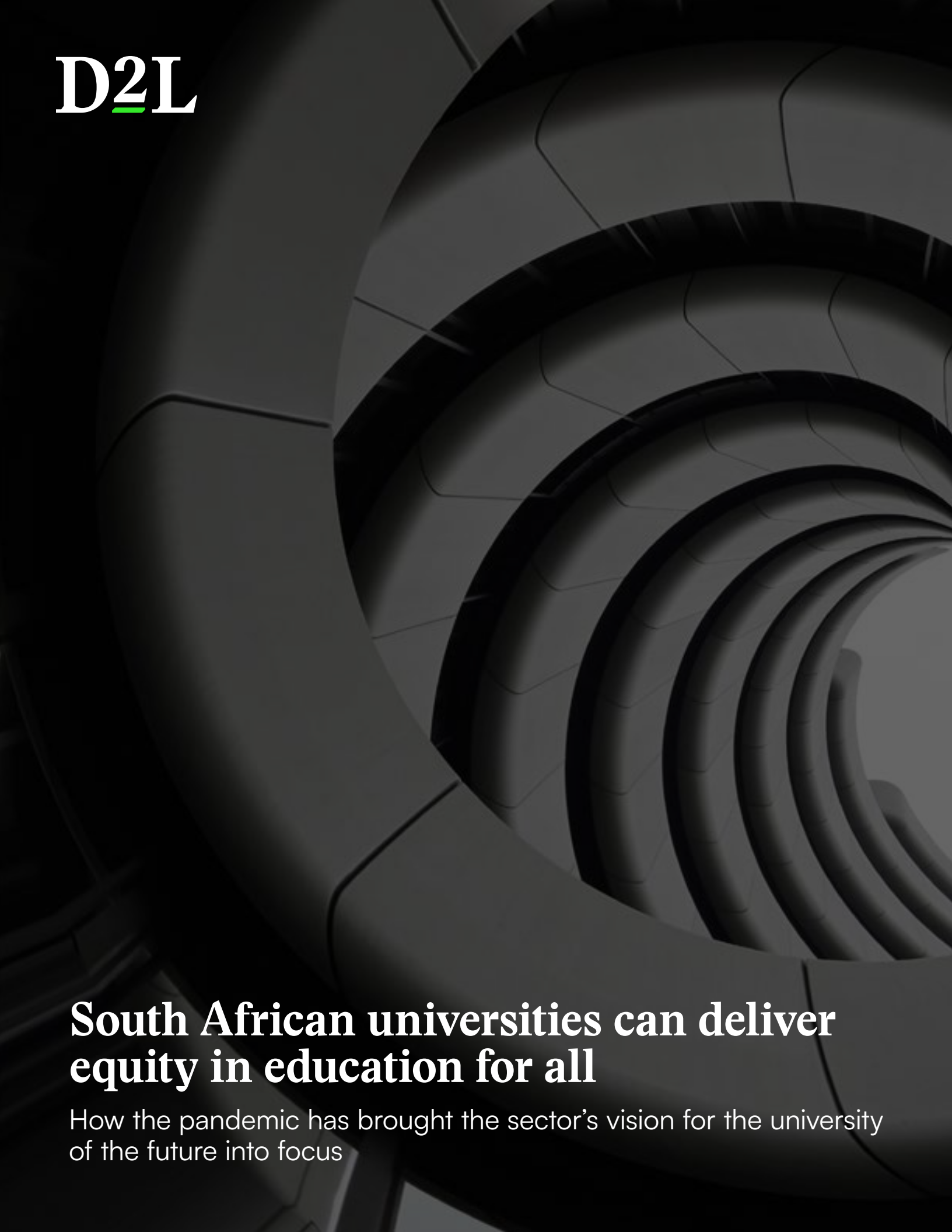

# South African universities can deliver equity in education for all

How the pandemic has brought the sector's vision for the university of the future into focus

# Introduction

Higher Education in South Africa was on the brink of change, even before the Covid-19 pandemic struck. Since the Fees Must Fall movement in 2015, the sector had begun facing up to challenges around student recruitment, retention and outcomes. Equity in education is a crucial goal, but there are barriers to overcome—with a vastly diverse population and issues from infrastructure through to connectivity.

The Coronavirus pandemic has been a catalyst for change, and many in higher education have embraced the opportunities it has provided. However, they also acknowledge that there are still obstacles ahead for the sector, chiefly in three key areas: connectivity and infrastructure, evolving pedagogies and a need to examine the fundamental role of the university in modern society.

In this paper, we look at how universities are addressing these challenges. We also hear how they are capitalising on the changes they have made over the past academic year, to accelerate the journey towards a higher education system that works for all.

# Improving infrastructure and connectivity

Universally, retention rates within South African universities are not as high as they should, or could, be. There are numerous factors that affect these figures. The student population in South Africa is diverse, both in terms of demographics and ethnicity. This diversity is actively encouraged, particularly since the Fees Must Fall protests, but it does present challenges.

Some students, especially first-generation undergraduates, for example, need additional support to adapt to university life. Many face financial hardships and may also lack the adequate technology needed to access and submit their work. For students who live in remote locations, connectivity is also a huge issue when they are studying off campus.

Professor Thea de Wet, Senior Director, Academic Development & Support, at the University of Johannesburg has carried out extensive research into rurality in Higher Education. Her joint papers and book with colleagues from Fort Hare, Rhodes University, the University of Johannesburg and the University of Bristol highlights how students from rural locations are disadvantaged when it comes to their university experience—and, according to World Bank Indicators in 2019, 33.14% of the South African population live in rural areas.

For the University of Johannesburg, and so many others, when the pandemic struck the challenge was to get technology into the hands of the students that needed it most. This is the seventh year that the university has given devices to students in the greatest financial need, with 5,600 laptops couriered across South Africa. It also provided monthly data bundles and IT support, but this was no solution for the lack of connectivity.

“Connectivity is a major challenge, and to some extent it’s out of our control,” says Professor de Wet. “We can advise on the best SIM cards, provide a helpdesk and make sure our students have access to the technology they need, but there’s nothing we can do about their connectivity or electricity supply. That’s why rural communities are constantly lobbying for improvements to infrastructure.”

Many universities issued technology and data packages to their students and, while it certainly helped many to stay connected during lockdowns, underlying infrastructure problems still hampered student engagement. Remote areas are frequently subject to power cuts which has hindered consistency and engagement levels.

# An enforced shift to online only

The rapid switch to home learning across South Africa proved what many in the sector have advocated for years—that, where sufficient infrastructure exists, technology has the potential to revolutionise the university experience for all.

Dr Dhaya Naidoo, Chief Information Officer & Executive Director: Institutional Effectiveness and Technology at Tshwane University of Technology says that many institutions have been pushing leadership teams to look at how technology can meet the changing demands of digital natives. He argues that, while blended learning has been around for a while, there hasn't been the drive from external forces to adopt it more widely.

Covid-19 has changed that. "Early adopters of blended learning were those who felt pressures from elsewhere which forced them to rethink their model—a need to examine overheads or a change to their student profile, for example. The pandemic has done that for everyone," says Dr Naidoo. He argues that many traditional institutions have plodded on with an 'if it's not broken, don't fix it' attitude but the pandemic has signalled a renewed enthusiasm for what technology can do.

# Reimagining the role of the tutor

At North-West University (NWU), the infrastructure was largely in place to enable remote learning quickly and at scale. But, while students were quick to embrace the change, the process took longer with staff. Deputy Dean: Teaching & Learning, Professor van der Merwe has led weekly webinars with academic staff on the innovative use and management of technology in teaching and learning.

It's an environment where staff can share best practices and are encouraged to present their own ideas. The webinars have evolved as staff have become more confident about using technology. They are now looking at ways to improve engagement and evolve the tutor's role beyond simply presenting at the front of a lecture theatre.

"If the student has the content already, what's the point of a lecturer just standing in front of them and delivering it anyway," adds Dr Naidoo at Tshwane.

**"We have to stop thinking about the content we're presenting and focus on how we want students to navigate it. Students can be sitting in front of a lecturer and Googling at the same time to see if they're being taught the right things. Rather than fear this we have to see it as a natural evolution of the role of the educator."**
Dr Dhaya Naidoo Chief Information Officer & Executive Director: Institutional Effectiveness and Technology, Tshwane University of Technology

## IMPROVING ENGAGEMENT IMPROVES OUTCOMES

Professor de Wet has seen the appetite for technology adoption grow among staff as the opportunities it provides have become more apparent. “Not only can staff reconsider the amount of time they spend on campus themselves, but there’s a huge desire to do more to improve engagement with students, regardless of whether they’re on or off campus,” she says.

Student engagement affects retention and outcomes, wherever students are learning—and these are priority KPIs for South African higher education. What the huge switch to online learning has demonstrated is how technology can help staff to identify behavioural patterns, monitor engagement and use data to make improvements.

The University of Johannesburg had its lowest drop-out rates ever last year. Professor de Wet believes that technology may have inadvertently become an intervention tool. “Technology has enabled us to see when students are switched on,” she says. “We can understand how much time students spend online, engaging in their work—across the whole university and by faculty. This is hugely valuable at departmental level—early warnings about students that aren’t engaging can trigger personal intervention from tutors and lecturers.”

Although many universities are just beginning to explore the analytics insight that technology can provide, they’ve already seen promising levels of engagement from online learning. They’re also actively looking at how they can tailor learning even more, using tech such as WhatsApp to interact with students, for example.

In terms of delivering equity in education this plays to the vision of no student being left behind. Many universities believe analytics will be a driving force behind a more personalised learner experience, which has been proven to increase student success.

NWU has also seen good engagement levels after the shift to online learning. Professor van der Merwe suggests this method of teaching may break down confidence barriers, adding: “Perhaps it’s something to do with the anonymity of engaging online, some students may feel less nervous about this.” That could certainly be true for first year, first generation students who can take longer to adapt to their degree course.

# A hybrid-first approach?

The pandemic has certainly prompted a big rethink on how and when we study. While many students will want to return to campus, at least some of the time—for social, emotional, academic and accessibility reasons, a more hybrid approach could free staff from admin tasks which gives them more time for teaching.

It could also see a rethink on rigid timetables. "Why can't students go at their own pace and decide when they're ready to sit an exam," says Professor van der Merwe. "Allowing them to repeat semesters or re-take modules would help with outcome and retention." He is not alone in suggesting that the ways in which universities used to teach and examine may be outdated.

Tshwane University of Technology has partnered with a Finnish University that runs accreditations in teaching and learning in higher education. Three hundred staff have already been trained on its module around using technology within the classroom. "We have to prepare the academic world for the role that technology can play in the university of the future, and how staff themselves can benefit from it," says Dr Naidoo.

**"NOT ONLY CAN STAFF RECONSIDER THE AMOUNT OF TIME THEY SPEND ON CAMPUS THEMSELVES, BUT THERE'S A HUGE DESIRE TO DO MORE TO IMPROVE ENGAGEMENT WITH STUDENTS, REGARDLESS OF WHETHER THEY'RE ON OR OFF CAMPUS."**

*PROFESSOR THEA DE WET: SENIOR DIRECTOR, ACADEMIC DEVELOPMENT & SUPPORT UNIVERSITY OF JOHANNESBURG*

# What is university for?

An examination of the purpose and role of the modern university lies at the heart of the strategic vision for many institutions. This encompasses the overall wellbeing of students, their employability and how universities can provide the skills that meet the demands of a changing society.

Prioritising student wellbeing

Retention rates and outcomes are inextricably linked to students' social, financial and mental wellbeing. Most universities have wellbeing programs in place. From the onboarding process through to graduation, they provide access to support on issues students might face throughout their university life.

A collaborative process that begins pre-admission, these programs are being built around key pillars that touch on the multiple aspects of a student's life inside and outside of university. This can cover academic advice, career development and life skills, such as financial wellness, as well as maintaining the student's overall wellbeing—physical, emotional and social. There is a general acknowledgement, however, that more can be done to prepare students for life beyond graduation.

# Educating for a life of versatility

"Universities would love to deliver students that could hit the ground running," says Professor van der Merwe. "But they also believe it's their role to deliver people who are intellectually excellent. What we need to be doing more is teaching students to apply their knowledge."

This is driving a change in the way traditional subjects are taught. From architecture students working on real world projects, to accountancy and finance undergraduates tackling real, rather than scenario-based challenges—universities recognise the need to develop critical thinking that can be applied in the workplace.

"We have introduced VR glasses to our law students to give them an introduction to real court systems, for example," says Professor de Wet. "If we're going to improve employability, we have to develop more work-integrated learning programs."

Dr Naidoo agrees that graduate skills are currently misaligned with the demands of the market. While much of this stems from a need to develop more critical thinking skills, he also argues that digital transformation and the Fourth Industrial Revolution, signal an acceptance that skills will continue to evolve.

"The speed of change means that 60% of current jobs won't exist in the future," says Dr Naidoo. "We need data scientists desperately now, but we won't need data scientists with the same skillset in ten years. Even professions like construction, that will continue to exist, will still need employees that are fully trained in 3D printing, for example. We can't just fulfil short term needs - universities need to educate for a life of versatility."

That's why so many are calling for a change to the linear paths of traditional degrees. Micro-credentialing, for example, enabling students to supplement their core area of study with complementary skills that will benefit them both in life and work, with photography, maths or statistics, for example.

An influx of adult learners will also continue to affect the balance between full-time on campus and part-time off campus students. Whether they're pivoting completely or upskilling it will be necessary to cater to this demographic.

Universities broadly agree that they need to get a more diverse range of students through higher education, but they don't currently have the mechanisms in place to deliver it. The sector will need more funding, more tutors and new ways of engaging with students.

# Seizing the opportunity for change

The South African higher education sector has learnt a lot from its experiences of 2020/21. The challenge now is to use that experience to build a system that guarantees equity in education.

“This is such a great opportunity to disrupt the educational model,” says Dr Naidoo. “The pandemic proved that our sector can do things at pace, and that technology can be used to
aid and even accelerate learning. We have to make sure we’re seeing tech as an enabler, facilitating a culture where innovation can continue to happen.”

He argues that the university of the future will bring people together to create knowledge, not just be consumers of knowledge. This is something that Professor van der Merwe echoes. “Everyone who collaborates in getting to the answer learns,” he says. “I want learning to be the focus, supported by but not driven
by technology”.

Covid-19 proved that South African universities are ready for change. As they grapple with the challenge of infrastructure and connectivity, they now have the impetus required to build a culture in which that change can continue to thrive.

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D2L develops software that makes the learning experience better. Our cloud-based platform—Brightspace—is the leading learning management system (LMS) for blended and fully virtual learning. It's easy to use, flexible, and smart. With Brightspace, schools can personalise the learning experience for every learner to deliver real results. Brightspace is used by learners in K-12, higher education, and the corporate sector, including the Fortune 1000.

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