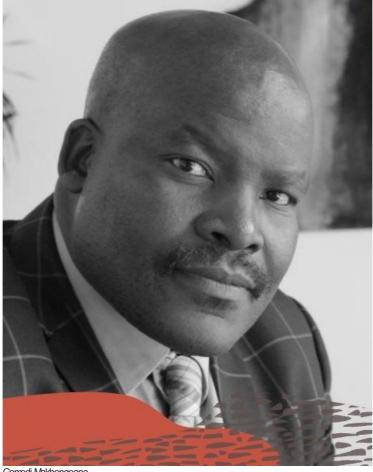# How can cloud help educational institutions?

By Gomedi Makhongoana   21 Jan 2020

With the highest youth unemployment rate in the world, paired with worrying skills shortages, the pressure is on universities and other tertiary education institutions in South Africa to admit more students.

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The key to expanding access is affordable education – as highlighted by the #FeesMustFall movement – but how are institutions supposed to meet this crucial socio-economic need while managing their ever-mounting expenditure, and swelling student numbers?

The adoption of next-generation cloud technology is proving to be an effective cost-cutting strategy for all sectors, and it has a special value for educational institutions in helping to keep tuition costs down.

To clarify, the vast majority of higher learning institutions recognise the need for digital migration as a contemporary operational essential but find themselves sinking a substantial amount of resources into preserving repository legacy systems.

This is because these databases are the only repositories for hard-to-move student data, in line with data retention compliance requirements. Making things even more challenging is the necessity to do more with less in an environment of uncertainty in otherwise a depressed market, where the government is considering how to realise a promise of free education, and equally collection of fees is not meeting revenue needs.

Next-generation cloud

As much as it may seem beyond universities' reach, a shift to the cloud will help to alleviate this burden. With Oracle's new Generation 2 Cloud, it is possible to reach a customer's desired outcome, and have systems up and running in just three to four months.

Previously, that journey – which requires an understanding of an institution's priorities, legacy system investment, etc., would take 12 to 18 months. Universities can return quickly to service delivery, and be in an overall better position to market themselves as progressive and competitive education providers in South Africa and the world.

Another advantage of next-generation cloud is that it is truly scalable and elastic, adjusting immediately to accommodate fluctuating workload requirements, and optimising spend, as customers, only pay for resources used. This is especially beneficial for educational institutions, which have "seasonal" needs, different over semesters and holiday periods.

At the same time, with greater elasticity and liberation from on-premise requirements, the cloud enables tertiary institutions to meet the educational needs of more students, without the need for more teaching resources. Cloud effortlessly provides e-learning to physically remote, and infrastructure deprived, learners who now simply require an internet connection to access digital class materials and other resources.

Universities are not IT businesses, of course, and precious staff resources should be focused on the high-value task of advancing the university, and its attractiveness, instead of mundane tasks centred around technology. With embedded AI and machine learning capabilities, Gen 2 cloud provides this benefit.

Cloud computing solutions

For example, the University of Adelaide now uses two chatbots – underpinned by cloud computing power – to streamline application queries for thousands of Australian and international students. Instead of jamming university call centre lines during business hours, and waiting for hours in a queue, students can determine their eligibility 24/7 via a three-minute interaction with a Facebook chatbot and Oracle Digital Assistant, respectively. Those students who do seek out human interaction enjoy longer periods of focused attention.

Closer to home, Stellenbosch University is overhauling its outdated academic and financial systems, adopting new cloud-based solutions that support scalable, reliable and integrated information ecosystems. Students will enjoy greater self-service options when managing their academic curricula. Meanwhile, university staff can achieve greater efficiency by using functions more closely aligned with contemporary, individual ways of working, combined with access to real-time, multi-dimensional analytics and reporting.

As with every organisation, for an educational institution to thrive and grow, employees must be equipped to focus on their areas of expertise and work more efficiently. They should not lose chunks of their workday to mundane tasks, such as security updates in the case of IT staff. Yet, with the average cost of a data breach in South Africa nearly R50 million, according to the Ponemon Institute, such functions cannot be a shortcut – especially at financially vulnerable universities. Higher education providers are a growing target for cybercriminals, attracted by the comparative ease of accessing the

disparate, older systems of these organisations.

In addition to encrypting all data by default, next-generation cloud mitigates this costly concern, thanks to embedded AI and machine learning capabilities. Autonomous cloud essentially runs itself, self-updating, self-securing and removing the ability for human error and system vulnerabilities to be exploited. It also learns the behaviour of all users so that it can easily recognise and act on anomalies, such as the same user logging in from two places minutes apart.

One final point to make is that the cloud not only helps universities optimise their spend but also fulfils their mandate of producing work-ready young professionals for the Digital Age. Just launched worldwide, Oracle Cloud Free Tier is a set of always free, non-contractual cloud services including Autonomous Database, which allows students, educators, IT professionals and others to access the same full functionality as Oracle paid services with no time limit. Potential customers are encouraged to play with the technology, exploring how it can bolster their organisation's performance, while students get hands-experience with contemporary business essentials.

It is true that entering the cloud world comes with substantial cost outlay. However, the journey is a partnership the whole way, and in addition to immediate performance benefits, customers see continually increased savings as they progress. Further providing a level of cost containment are simplified and flexible purchasing and consumption models, such as the ability to migrate your on-premise licence with you to the cloud. There are multiple ways to maximise the value organisations receive from the cloud, and for future-minded educational institutions, the time to embrace the shift is now.

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