

The Rise of the University without Classrooms after COVID-19

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Abstract

In this chapter we argue that university face-to-face teaching will gradually be replaced in the future with online teaching. In particular, we argue, this will happen in the light of the Fallist movement that has affected the university sector for the last five years and the current impact of the COVID-19 pandemic. Firstly, we begin by providing a succinct overview of the history of the South African university sector and the changes implemented in post-apartheid South Africa. We specifically outline the neoliberal agenda, which became the main force driving the university. Secondly, we discuss how South Africa's new vision for higher education with its neoliberal policy agenda is nudging the university in the direction of online tuition. Thirdly, we examine the infrastructural readiness of universities for online teaching. We conclude by arguing that the financial constraints and global pressures imposed on the tertiary education sector have forced the university to implement cost-cutting measures by looking for cheaper modes of programme delivery to survive in an already financially challenging space.

Keywords: South Africa; universities; COVID-19; neoliberalism; online learning

1 Introduction

All universities in South Africa, over the last five years, have been plagued by enormous student protests, which at times descended into violence. What started with an intervention against colonial symbolism at the University of Cape Town in 2015, was strategically leveraged into a countrywide demand for no fee increases (Murriss 2016). At the beginning of 2016, Le Grange (2016) reports, these student protests continued with the following triangulated demands:

- (i) free higher education;
- (ii) a decolonised university curriculum; and
- (iii) insourcing of workers [cleaners and security] at universities (for full details of the Fallist movement see Le Grange 2016; Postma 2016; Koopman 2019).

These protests over the last five years under the Fallist movement have brought uncertainty, unrest, and at times unprecedented chaos to most universities. This is because these protests forced many universities to shut down, impeding the academic project of teaching and learning. In reflecting on these protests, it is clear that many lessons were learned in how to avoid or mitigate the stopping or slowing down of teaching and learning in the future. One of the biggest lessons learned by universities was the need to invest heavily in technological tools (laptops and mobile devices), internet-based software programmes, and online learning management systems that would support online teaching where campuses were made inaccessible during the protests. In addition to the online infrastructure developments, academics have received training in how to facilitate online instruction to equip and empower them with the necessary technological skills for effective tuition. For example, at the institutions where we work, training was rolled out to all staff on the effective use of online management systems, learning management systems, and the use of open educational resources. These investments were made so as to ensure that the academic project continues in the event of further student protests that could even result in a forced shutdown of universities.

Just as the unrest, chaos, and tensions precipitated by the Fallist movement between students and management appear to have subsided at most universities at the time of the writing of this chapter, the COVID-19 pandemic unexpectedly struck the whole world, including universities, like a tsunami.

The impact of COVID-19 is so dire that most world leaders announced some form of national lockdown. In South Africa, President Cyril Ramaphosa went as far as declaring a national state of disaster on the 16 March 2020 on the national broadcaster (SABC) in response to COVID-19. This was done as a mechanism to impede the further spread of the novel SARS CoV-2 virus. Some of the strategies imposed in terms of the Disaster Management Act, 57 of 2020, include a full lockdown of borders, a temporary ban on all international flights, and the closure of most government departments, schools, universities, and businesses across the country. Only essential services, such as hospitals, clinics, pharmacies, laboratories and some grocery stores, were allowed to operate. The closure of all universities meant that all face-to-face contacts, including lectures, laboratory work, conference attendance and graduation ceremonies, had to be cancelled as faculties were mandated to practise social distancing, or physical distancing, during the lockdown period.

While we are fully aware that any predictions as to what the full extent of the impact of COVID-19 will be on the country and the university would be premature, it is against the disruptive background of the Fallist movement, COVID-19 pandemic and the neoliberal agenda of government for the university such as the fourth industrial revolution, that we proffer ideas for the future of the South African university sector. These are significant phenomena and therefore generate a sense of urgency to explore with ‘possibilities’ and ‘imaginings’ with an open mind what a South African university in the near future might look like. Such imaginative speculation or reflection allow one to travel into the future, to invent new ideas and new realities and at times, new ways of doing things. According to Guatarri (2001), new possibilities are created by returning to the past or at times replacing existing models with new ones but rather in seeing current events (in this case dealing with the COVID-19 pandemic) as a new constellation of actions and behavioural changes that could take us on a new path. This new post-COVID-19 path could lead to the creation of a university without classrooms where academics and students could meet and connect online.

We begin by providing a brief summary of the changes that took effect in post-apartheid South Africa, and of the way that the neoliberal agenda of the new democratically elected government became the main driver of tertiary education. We specifically outline the impact of the neoliberal agenda on the university. Secondly, we discuss how South Africa's new vision for education

and policy initiatives built on neoliberal values has nudged the university towards online tuition. Thirdly, we investigate the infrastructural readiness of universities to implement online teaching. We conclude by arguing that the financial constraints and global pressures imposed on the university sector have forced universities to implement cost-cutting measures through cheaper modes of programme delivery in order to survive in an already financially challenging space.

2 A Brief Overview of the Rise of the Neoliberal University in South Africa

Seeing that a good historical understanding of events is critical for theoretical rigour and clarity, we commence by providing a succinct overview of changes that took place in the higher education sector, in the shift from apartheid to post-apartheid South Africa. Under apartheid, South Africa had 15 public universities and 21 public technikons, all situated within a gigantic bimodal distribution. The term bimodal refer to a higher education system designed for the minority white student population and a separate system designed for the black masses in the country. Consequently, these 36 public institutions were strictly divided along racial lines as they were classified as ‘whites only’ and ‘blacks only’ institutions. Among the 15 public universities, the ‘whites only’ institutions were labelled as the prestigious universities, while the ‘black universities’ were labelled as insignificant. This is because, under apartheid, the role of ‘black universities’ in the national project of socio-economic development was minimised. Consequently, these ‘black’ institutions experienced many economic challenges and failures, coupled with stagnation and regression (Assie-Lumumba 2006). Furthermore, significant instability plagued these universities as a result of dangerous and at times, violent ‘confrontations between students, faculties, administration and government’ (Waghid 2012: 71). The students who attended these universities came predominantly from impoverished backgrounds as well as broken homes and poorly resourced schools, where they were taught by mostly under-qualified and unqualified staff. The communities in which they resided were plagued with innumerable social ills, such as gangsterism, drug addiction, teenage pregnancy, high drop-out rates amongst school children, and uneducated parents, most of whom had never seen the inside of a university lecture theatre.

The prestigious universities, on the other hand, were strong and stable institutions, because:

- (i) they were well resourced;
- (ii) their alumni ran major industries; and
- (iii) their graduates were appointed to influential positions in government.

Furthermore, they attracted the best academics, who were grounded in a strong research culture and who had well-established national and international partnerships and networks. These universities attracted affluent students, whose parents were educated or belonged to a particular social class and so could provide the resources needed to support their children. According to Waghid (2012), these universities could produce advanced-level knowledge, quality scientific knowledge, as well as technology, and were able to train highly skilled graduates for the labour market.

In the shift to post-apartheid South Africa, the new democratically elected government wanted to use education as an instrument for a more global undertaking of social transformation. One of the reasons for this shift, Peters (2004) explains, is because global politics are driven by a set of policies based upon neoliberal principles. This meant that universities had to extend their role from mainly promoting national development to advancing global development. Furthermore, it also meant that curricula had to reflect the needs of a global community that required high-level knowledge and skills to meet the increasingly growing demand for highly trained skilled labour. To drive this new neoliberal agenda of universities required new forms of corporate managerialism and the adoption of private management styles. Subsequently, South African universities were no longer viewed as mechanisms for addressing the conspicuous social inequalities plaguing communities and for facilitating the knowledge required to address these inequalities. A direct consequence of the shift from a national development agenda to the advancement of a global neoliberal agenda, Vally (2020: 3) reports:

is the struggle for a fair, just and humane society, substituting for these unaccountable and avaricious global autocracies based on the power of money. If there is to be any hope of achieving the goal of a democratic and humane society, then abandoning the public mandate of the state is not an option.

These neoliberal ideals over the years were gradually phased into university culture through policy development and formulation. This neoliberal economic and global agenda is evident in various policy initiatives, such as the Transformation for Education and Training White Paper Act of 1997, the 1996 White Paper on Science and Technology, and The National Development Plan in 2001. These policies meant the rise of the neoliberal South African university. To drive this neoliberal agenda, the National Development Plan was drafted proposing mergers between the 15 universities and the 21 technikons created under apartheid. This merger resulted in the formation of 23 universities in post-apartheid South Africa. Other outcomes proposed by the NDP were to provide blacks from historically impoverished communities greater access to the university, so as to enhance their cognitive abilities vis-à-vis the technical and professional competencies, and to allow greater competitiveness in the labour market. According to Koopman (2019), these roles proposed in the National Development Plan for Higher Education (2001) indicate the main roles of the university as being:

- (i) human resource development;
- (ii) high-level skills training; and
- (iii) production, acquisition and application of new knowledge.

The aims of the NDP are aligned with *White Paper 1* on the Transformation of Higher Education (DHET 1997), which proposes the restructuring of higher education (HE) whose main aim should be to ‘meet the needs of an increasingly technological economy with the capacity to participate in a rapidly changing *global context*’ (Koopman 2019: 60). Koopman argues that this restructuring which took place created a new so-called ‘global context’ in which graduates needed to be equipped with the requisite knowledge, skills, and capabilities to use and implement in a super-complex world that is constantly changing. This means universities moved certain ‘skills and capabilities’ to the foreground, while other foundational ‘skills’ – such as critical thinking and self-directed learning – became increasingly marginalised. He points out that sixteen years later, this policy objective became substantiated by the Post-School White Paper (2013) and the National Development Plan (2013), which state that the two main objectives of the South African university are to provide students with high-level skills for the labour market, and to be dominant producers of new

knowledge. In other words, South African universities now frame their performative educational discourse in terms of ‘training for basic workplace skills’ and ‘student performance and competitiveness’. These policy objectives are the manifestation of an entire politics of higher education based on neoliberal principles, and consequently views the training of students in terms of ‘efficiency protocols’.

2.1 The University as the Primary Driver of Neoliberalism: The Future is Already Here

The South African university as a driver of government’s neoliberal agenda will unquestionably continue to make knowledge expansion and technological development its primary goal. To further extend the global agenda of South African universities, which aims to gradually move towards more online and web-based teaching and learning, the President of the Republic of South Africa announced his new vision for education in 2019, which is to prepare students for the fourth industrial revolution, more commonly known as 4IR (Businessstech 2019). This new vision (4IR) for universities has been enthusiastically supported by the Department of Basic Education, the Department of Higher Education, and university administrators, despite the current economic challenges, massive digital inequalities, and unprecedented unemployment rates in South Africa (2020). Our aim is not to discuss in detail what the 4IR is about, and the potential consequences for developing countries (for full details see Schwab 2016). In short 4IR, or as Schwab (2016) reports the machine age, refers to a new raft of disruptive technologies such as robotics, artificial intelligence, digital computing, 3D printing amongst various other technologies and innovations that will soon hit all mainstream industries across the globe. According to Brynjolfson and McAfee (2011), this highly advanced technological revolution, envisaged in the 4IR, will be profoundly beneficial for industry, as everything in manufacturing will be digitised to bring about more economic production, rather than environmental disruption. For this revolution to materialise, a highly skilled, technologically adept and innovative workforce is required. The production of this workforce, to operate in what Peters (2018) refers to as a cybernetic capitalistic system, must be produced by universities. This means that universities can be seen as enslaved to corporate capitalism, because to become active players on the global stage means they must produce the workforce of the future.

According to Dreyfus (2008), the shift to neoliberalism is commensurate with a shift from the knowledge economy to the digital economy. In the 4IR, this shift to digitisation involves replacing *poiesis* – the making of things – with a world of online and digital control. The shift to digitisation, as noted by Dreyfus (2008), already forms part of the outcomes for the higher education sector globally. In South Africa, these outcomes are stipulated in the White Paper for Science, Technology and Innovation (2019). The policy states:

The lines between physical, digital and biological systems are becoming blurred, and governments around the world are planning for the Fourth Industrial Revolution. In particular, *it is necessary to prepare for* how artificial intelligence (AI) and advances in ICT will change the way society and the economy function (p. 4, e.a.).

We have italicised the phrase '*it is necessary to prepare for*' so as to underscore the need for an awareness of the significance of artificial intelligence (AI) and how this will affect both culture and the economy in the future South Africa. This expression also speaks directly to all educational institutions that will need to brace themselves for massive changes with respect to the type of knowledge, as well as the mode of delivery of that knowledge to prepare students for 4IR. To put this into perspective, in the previous revolution, the focus of the university sector in developing students for the knowledge economy was on the interrelatedness of 'thought content' and 'thought process', an approach which construes the world as 'an object of thought'. In the 4IR 'thought content' and 'thought process' are replaced with code theories and functionality (Koopman 2019). Because 4IR has its roots in the notion of 'German 4.0 *industrie*', which refers to 'smart cities', 'smart industries', 'smart factories', 'smart manufacturing' and so forth (TIPS 2018). Thus, the ontogenesis of AI, which drives these smart sectors, ought at the same time to form the ontogenesis of learning, so that the student can connect with the abstract worlds of robotics and programming. This means a shift is needed in universities from common sense knowledge and theories in familiar contexts to technical knowledge and supra-commonsense knowledge. Thus, the future of the university as a digital world operating in a virtual world is already here. This world of digitisation driven by government's hidden neoliberal agenda, are gradually turning the university into a service engine,

to drive what Peters (2018: 239) terms ‘an innovation hot-house of global capitalism’. Thus, neoliberal policies driving universities in South Africa will increasingly envelope the university as a digital hub of technological knowledge production. Thus, it is fair to argue that the current COVID-19 pandemic indirectly assists governments across the globe to accelerate the shift to internet-based online teaching using various learning management systems in universities.

3 The Infrastructural Readiness of South African Universities for Online Learning

Over the last two decades, the South African government, through its Department of Basic Education and the Department of Higher Education, has invested heavily in the development of the government’s ICT infrastructure. This investment was made to ensure a more equitable inclusion of the majority of the population into the modern digital world. According to the World Economic Forum Global Information Technology Report (2007), South Africa has a very modern and vibrant ICT infrastructure, with an annual investment of US\$9.6 billion. Although this infrastructure is unevenly spread across the country, it was ranked by the World Economic Forum (WEF) as 37th out of 115 economies, and is considered ready to benefit from further ICT developments. Over the last three years, we have witnessed a countrywide roll-out of broadband and fibre-optic cables. This was done under the auspices of the WEF with public funding, private investment and philanthropic support under the banner of the *Internet for All* project. The main objective of this collaborative initiative, which was officially launched during the 2017 WEF meeting in Durban, was to make internet access available to all South Africans by the year 2020, at an average cost of US\$65 per person.

The White Paper for Science, Technology, and Innovation (2019) states explicitly that all universities in South Africa must now start producing the much-needed graduates with the required technological skills for the future. All of these developments position the university at the centre of producing the ‘creative and innovative’ skills needed for the shift to a digital labour force. For example, faculties of education across the country are now expected to produce a new cohort of teachers who are trained and skilled in applying advanced technological abilities and capacities in order to prepare learners for the fourth industrial revolution, which requires specialised

technological skills. Thus, to be part of the hyper-modern world driving and driven by the technological economy of the fourth industrial revolution means that universities must produce graduates who can function optimally in an ever-changing, highly demanding technological era. To meet the demands of this digital world, most South African universities are well-prepared both in term of their technological infrastructure and institutional policies guiding teaching and learning.

For example, at the Cape Peninsula University of Technology, the institutional e-teaching-and-learning policy clearly states how the university ‘strives to establish an online electronic presence for all offerings, being either a complete subject or modules within all academic programmes... Lecturers will be requested to enhance the online experience by adding additional electronic Learning and Teaching applications as appropriate’ (CPUT 2020: 2). To meet this objective, over the last four years, the university has rolled out large-scale online-teaching training and established the Centre for Innovative Educational Training (CIET) so as to assist academics with technological support. The focus of the training was on blended learning and the flipped classroom, in order to introduce academics to various online platforms and Web 2.0 applications. Furthermore, the Vice-Chancellor promoted the idea that he and his management team is committed to the idea of one smart university. His new vision is to produce graduates that will be at the forefront of the technological age. Furthermore, he benchmarked the university’s technological progress with reference to MIT, one of the most technologically advanced institutions in the world. On several occasions, he pointed to the vision of making the university the MIT of Africa. The University of the Western Cape experienced similar trends in the move towards digitisation, as their staff are already developing full online programmes for the Postgraduate Certificate in Education (PGCE) programmes. If things go according to plan, these online programmes will be rolled out in 2021. All resources and online learning management systems are already in place to drive online teaching. Other examples of universities positioning themselves to go fully online are the constant migration to digitisation, such as e-libraries, open-access sites, open educational resources, and various other online databases and portals.

The COVID-19 pandemic is gradually pushing the South African university of the future into a new world of online technologies, as academics are expected to offer their courses online by using various Web 2.0 applications

and effective learning management systems. This shift to online learning together with the government's new vision of the 4IR are misaligned with the demands by students across the country for a decolonised university. A decolonised university entails exorcising all aspects of the university, including its vision and curricula, and detaching them from Western frameworks of thinking and ideas, and the inclusion of an African philosophy of thinking which places greater emphasis on the experiences, practices, beliefs, values and modes of African ways of life that are representative and distinctive of the black populations of Sub-Saharan Africa. The shift from the face-to-face classroom setting to online teaching and learning denotes a fundamental shift towards neoliberal core ideals that mainly benefits national and international corporations, shows little regard for the social consciousness and issues of its citizenry. In the process, with the shift to online learning, universities are gradually playing into the hands of neoliberal corporate villains.

4 The University Post COVID-19: The Rise of the University without Walls

At the time of the writing of this chapter more than a third of the world is in some form of lockdown to curb the further spread of the SARS CoV-2 virus. The closure of major industries such as airlines, import-export companies, retailers, live sports, restaurants, and many others have crippled the global economy. In financial terms, the United Nations has predicted that the global economy might experience a 9 trillion US dollar shortfall in global income. Developing countries could experience a 220 billion US dollar shortfall. In South Africa, the Minister of Finance, Tito Mboweni, said on the national broadcaster that 'COVID-19 had placed the economy in deep recession' (SABC News, 24 June 2020). Should this happen, economists explained that our already ailing economy could shrink by a further -6.1%, while unemployment might reach unprecedented figures of more than 50 percent. A question worth asking is: How COVID-19 will impact on the university of the future?

As universities confronting the Fallist movement were already searching for cheaper ways of undertake programme delivery because of serious financial challenges, the search for some form of financial relief will now become even more significant. This search will force universities towards

adopting less expensive ways of lesson delivery. The financial strain that the Fallist movement placed on the university is unsustainable. This is because the Fallist movement forced universities into:

- (i) debt cancellation where billions of rand of student debt was cancelled;
- (ii) implementing no fee increases;
- (iii) offering free high education for the poor, causing universities to rely heavily on state subsidies; and
- (iv) insourcing workers, amongst many other actions.

This chain of events had an adverse effect on the everyday running of the academic project, as many universities found themselves in an unsustainable economic situation. Suddenly, classrooms are found to be ill-equipped with outdated lecture theatres, inadequately resourced science laboratories, and outdated computer laboratories. Furthermore, academics find themselves in oversubscribed classrooms, with overloaded timetables, pressured into ensuring high pass rates in their classes to generate student subsidies, having to appoint part-time staff, and facing increased pressure to publish and to generate funds through research projects. Over the last few years in our universities, the issues of cost-cutting and fundraising formed part of most of our departmental and faculty staff meetings that we attended. The question that always arises is: how can we as a faculty reduce costs? This is indirectly a question about whether there are cost-effective ways or less expensive ways of delivering our programmes?

What will exacerbate the financial challenges facing many universities across the country is the financial impact of the current COVID-19 pandemic. Although we do not know precisely what the financial impact of the pandemic will be, we do know that state funding will be severely affected, as South Africa's economy before COVID-19 was already ailing. Given the immense impact of the Fallist movement aggravated by the immense economic impact of COVID-19, we predict that universities will gradually move towards cheaper modes of programme delivery. Rothblatt (2012) avers that one of the most cost-effective ways to ensure programme delivery and to generate more funds is to shift to online teaching and learning. By shifting to online teaching, universities can reach thousands of students pushing for maximum profits (Rothblatt 2012), which according to McCluskey and Winter (2011), require less permanent staff.

5 COVID-19 a Practice for Online Teaching and Learning

Apart from the banking sector, and various other businesses that are already operating online, during the COVID-19 pandemic, we witnessed that most services not operating online were forced to go online during the lockdown period across the globe. This shift was done in an effort to continue running their businesses. These include online grocery delivery services, online fitness classes, online telecommunications apps, online media coverage, online birthday celebrations, online funerals, as well as online teaching. Many companies had to adapt to allow their workers to work from home as a part of the new normal. Tony Frost, an economist from Ivey University, claims that the shift to online services will become one of the long-time legacies of the COVID-19 pandemic. He points out that the pandemic motivated people to move towards digitisation. In other words, if the labour market of the future will require a workforce with digital capabilities to work remotely, one of the universities' objectives through their programmes will be to produce students with the required skills.

Rothblatt (2012) points out that universities moving online is long overdue, because modern students: (i) suffer from a short concentration span and have low lecture attendance levels. Although many academics and students might deplore efforts to denigrate the traditional face-to-face classroom, universities will strategically coerce academics and students to move online in their attempts to survive as institutions. This shift to online teaching is already on the cards. Various institutions are informing their staff of this eventuality during this period so as to prepare them for online teaching. In other words, the COVID-19 pandemic can be interpreted as a practice run for universities to evaluate the possibility and practicality of online teaching for the future. Drawing from Deleuze and Guattari (2001), the conditions of our existence shape and drive our being and becoming, which in the process territorialises us. The current COVID-19 pandemic creates the possibility that we can be deterritorialised from our old ways of acting and behaving. In other words, the COVID-19 pandemic has the potential deterritorialise us from life as we know it, or as we are used to it. The problem is that if deterritorialisation takes place too rapidly, it can do more harm than good. So, instead of rushing the shift to an online world, we suggest a more gradual flow of life to guide and direct both students and academics to a world of online teaching in order to penetrate the porous boundaries of deterritorialisation.

6 Conclusion

This chapter has argued that the future university in South Africa as a ‘university without walls’ is inevitable. A university without walls means that universities in the future will shift from traditional face-to-face instruction for curriculum delivery to an online approach. This is inevitable, we believe, given the immense impact of the Fallist movement that has plagued the university landscape, that has imposed an unsustainable financial burden on the university sector. To exacerbate the current bleak financial state in which universities find themselves, the COVID-19 pandemic has placed even more pressure on the financial position of most universities. Although we are not yet in a position to accurately describe the impact of the COVID-19 pandemic on the university landscape, given the fact that in South Africa we are already experiencing a recession, the impact might be more severe than from the Fallist movement. In other words, new ways of curriculum delivery will have to take effect in order to relieve the financial pressure. This means that the online university without walls is already on the cards. Life after COVID-19, although far too early to predict how it will affect us, will definitely not be the same. What we do know with a high degree of certainty is that traditions of human behaviour such as handshaking, and face-to-face teaching will definitely not be the same. Thus, this shift from face-to-face teaching to an online university is nothing but inevitable, given the South African government’s entrenched neoliberal agenda for universities.

References

- Assié-Lumumba, N.T. 2006. *Higher Education in Africa: Crises, Reforms and Transformation*. Dakar, Senegal: Council for the Development of Social Science Research in Africa.
- Brynjolfsson, E. & A. McAfee 2011. *Race against the Machine: How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Employment and the Economy*. Lexington, MA: Digital Frontier Press.
- Businessstech 2019. South African Schools will Soon Get These 3 New Subjects. Available at: <http://businessstech.co.za/news/government/304684/south-african-schools-will-get-these-3-new-subjects/>

- Cape Peninsula University of Technology 2020. *Policy and Procedures on e-Learning*. Bellville and Cape Town: CPUT Printers.
- Deleuze, G. & F. Guattari 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*. Massumi, B. (trans.). Minneapolis: University of Minnesota Press.
- Department of Higher Education and Training 1996. *White Paper on Science and Technology*. Pretoria: Government Printers.
- Department of Higher Education and Training 1997. *White Paper 1 on the Transformation of Higher Education*. Pretoria: Government Printers.
- Department of Higher Education and Training 2013. *White Paper for Post-School Education and Training*. Pretoria: South African Government.
- Department of Higher Education and Training 2012. *National Development Plan*. Pretoria: Government Printers
- Department of Higher Education 2019. *White Paper on Science, Technology and Innovation*. Pretoria: DHET.
- Dreyfus, H.L. 2008. Being and Power: Heidegger and Foucault. *International Journal of Philosophical Studies* 4,1: 1 - 16.
<https://doi.org/10.1080/09672559608570822>
- Guattari, F. 2001. *The Three Ecologies*. Pindar, I., & P. Suttin. (trans.). London: Athlone Press.
- Koopman, O. 2019. Is the Decolonisation of the South African University Curriculum Possible in a Neoliberal Culture? *Alternation* 24: 54 - 74.
<https://doi.org/10.29086/2519-5476/2019/sp24.2a3>
- Koopman, O. & K.J. Koopman 2018. A Curriculum of Inclusivity: Towards a 'Lived Body' and 'Lived Experience' Curriculum in South Africa. *Indo-Pacific Journal of Phenomenology* 18,2: 1 - 12.
<https://doi.org/10.1080/20797222.2018.1536360>
- Le Grange, L. 2016. Decolonising the University Curriculum. *South African Journal of Higher Education* 30,2: 1 - 12.
<https://doi.org/10.20853/30-2-709>
- McCluskey, F. & M. Winter 2012. *The Idea of the Digital University: Ancient Traditions, Disruptive Technologies and the Battle for the Soul of Higher Education*. Washington, DC: Westphalia Press.
- Murris, K. 2016. Rhodes must Fall: A Post-humanist Orientation to Decolonizing Higher Education Institutions. *South African Journal of Higher Education* 30,3: 274 - 294.
<https://doi.org/10.20853/30-3-653>
-

- Peters, M.D. 2004. *Higher Education, Globalisation and the Knowledge Economy*. In Walker, M. & J. Nixon (eds.): *Reclaiming Universities from a Runaway World: Society for Research into Higher Education*. New York: Open University Press
- Postma, D. 2016. The Ethics of Becoming in a Pedagogy for Social Justice: A Post-humanist Perspective. *South African Journal of Higher Education* 30,3: 310 - 328. <https://doi.org/10.20853/30-3-651>
- Rothblatt, S. 2012. The Future isn't Waiting. In Barnett, R. (ed.): *The Future University: Ideas and Possibilities*. New York: Routledge
- SABC News 2020. Finance Minister Tito Mboweni Revised Budget Speech after Economic Shock of COVID-19. Broadcast Live on SABC News on 24 June 2020.
- Trade and Industrial Policy Strategies 2018. *World Economic Forum and the Fourth Industrial Revolution in South Africa*. Pretoria: Department of Trade and Industry.
- Vally, S. 2020. Between the Vision of Yesterday and the Reality of Today: Forging a Pedagogy of Possibility. *Education as Change* 24: 1 - 24. <https://doi.org/10.25159/1947-9417/6984>
- Waghid, Y. 2012. The Decline of the University in South Africa: Reconstituting the Place of Reason. In Barnett, R. (ed.): *The Future University: Ideas and Possibilities*. New York: Routledge.

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