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Chapter 2. The Unbundled University: Researching emerging models in an unequal landscape

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Introduction

The term networked learning is generally thought of as learning that is mediated by digital networks, with an emphasis on remote collaborations. However, over the past decade, and as illustrated by several contributions to previous editions of the Networked Learning conference, it has successfully repositioned itself as an area of socio-technical interest beyond online education *per se* (e.g. Bayne et al., 2014; Cranmer et al., 2016). The focus on the networks into which learning is subsumed has been gradually challenged and expanded, drawing on several sociological and philosophical trends: posthumanism, actor-network theory, critical praxis, and globalisation studies to name a few. It is now clear to many in the Networked Learning community that our understanding of the changing educational landscape hinges on the interdisciplinary study of several, thoroughly networked phenomena in which technology is involved: the market economy and the neoliberal paradigm, emerging global markets of higher education, local and global inequalities, changing forms of educational governance, and emerging business models. In this regard, the generalised 'state of crisis' of global Higher Education (HE) and the emergence of public-private partnerships to develop digital provision for teaching and learning represent together, an area of great empirical interest.

This chapter and the project it stems from are interested in the increasing role of the market in HE, and the harnessing of digital technology for increased opportunities for networked learning. In particular it is focused on how they are shaping developments in HE teaching and learning provision and resulting in the unbundling of educational provision. We are particularly interested in teaching and learning provision, rather than any other of the myriad ways in which the market is active in HE (Komljenovic and Robertson, 2016), such as provision of student accommodation or campus catering facilities. The study analyses important changes in educational provision that have been in the making for the past three decades. However, these changes have gained greater traction recently, thanks to the general growth and the ensuing financial strain experienced by universities, as demand for tertiary education remains steadily high in the Global North and explodes in the Global South. This growth is evidenced by official data on Gross Tertiary Enrolment Rates, which show worldwide participation in HE increasing at the pace of 1% a year, termed as High Participation Systems (Marginson, 2016). Over the last two decades many commentators have seen this expansion as coinciding with a larger crisis of public HE (e.g. Readings, 1999; Mamdani, 2007; Washburn, 2008; Holmwood, 2011), which has been exacerbated by the global financial crisis of 2008, affecting in particular the funding of HE in developed and developing countries. The reduction in state funding (Robertson, 2010) and the increase in student numbers has led to Higher Education Institutions (HEIs) searching for additional and alternative sources of income, in the shape of new student markets and new forms of provision. The utilisation of digital technology to develop these new forms of provision is the result of a number of drivers, including: the desire to reach new student populations unable to attend campus-based classes, due to location or other commitments such as employment or family, the finite physical space of many HEIs, especially those located in urban environments, the drive to develop low cost provision for increasing numbers to serve the massification of higher education, and also as a way to develop more innovative, learner-centred forms of provision (McCowan, 2017; Bradwell, 2009; Lewin, 2012; Rizvi et al., 2013). At the same time private companies are keen to expand into this area, to take advantage of these 'market openings' (Williams and Goldberg, 2005, p.726). As a result, the past few years have seen the appearance of many flexible online courses and qualifications, delivered in new configurations of providers and partnerships, including by parties new to the sector, through a process of disaggregating educational provision into its component parts, or unbundling. Whilst these changes may offer opportunities for increased numbers of learners to access education and thus contribute to economic prosperity, there is very little empirical research about the nature, process and impact of unbundling, as it is playing out in the rapidly reconfiguring global HE system.

The evolving nature of higher education and emerging topics in networked learning: defining the intersection of digital technology, marketisation, and unbundling

HE, globally, is experiencing unparalleled demand (with a few exceptions) as well as huge financial pressures. At the same time, universities have placed a greater emphasis on accountability and measured outputs, such as the Research Excellence Framework (REF) and the Teaching Excellence Framework (TEF) in the UK and the increasing value attached to global rankings (Johnes, 2018), whilst forging links with industry and business to support the knowledge economy (Olssen and Peters, 2005). Globally, the concept of the university as a public good is under threat in favour of a market-driven approach to HE governance in which universities are increasingly pushed to commodify their products and outputs and compete for funding (Lynch, 2015). There has been an increase in fees in many places, including South Africa (Case, 2017), in response to the reduction of government funding as well as due to the market influence which suggests that those who directly benefit from higher education should pay for it (i.e. students in the form of higher future income).

Figure 1: The intersection of digital technology, marketisation and unbundling (Morris et al., 2017, p.1).

Alongside these external pressures, universities also face rising expectations from students, educators and employers to make effective use of digital technology to increase flexibility, access and improve learning outcomes for their students, as well as respond to massification, for example through Massive Open Online Courses (MOOCs). MOOCs, emerging in 2008, have come to be dominated globally by a handful of companies such as Coursera, edX and FutureLearn, which provide platforms and templates for courses, whilst the institutions develop course content. MOOCs began as free, open access courses (Castillo et al., 2015; Lawton et al., 2013) but have increasingly become monetised through fees for certification, accreditation and prolonged access (Morris, 2017; Shah, 2018). At the same time MOOC platform providers are increasingly serving as online programme management companies (OPMs) in the formal credit bearing sector. Additional emerging forms of provision, range from a single learning object (e.g. digital badging), to modules or courses (e.g. microcredentials) and full online degree programmes (Kranz, 2014; Radford et al., 2014; Dillahunt et al., 2016) This is resulting in the creation of markets in the sector, as universities develop new business models and rely to varying degrees on the involvement of private companies (Komljenovic and Robertson, 2016; Sharrock, 2015). Private companies are taking on the role of OPM, including activities such as market research, student enrolment, and technical support, as well as content development (P3-Edu, 2018). It is this intersection of the increasing role of the market and the activity of private companies in higher education, exploiting the affordances of digital technology which is leading to the unbundling of teaching and learning provision (see Fig 1). Examples of unbundling are increasingly common in the UK HE landscape, in particular for the postgraduate market, a phenomenon which may be partly due to the domination of MOOCs by learners from the post-university workforce, using online courses as a means for continuing professional development (CPD), lifelong learning or skills development (Swinnerton et al., 2017). For example, one institution which partners with a MOOC platform provider has developed 16 MOOCs to date. The institution also partners with two OPMs to provide online degrees, with multiple entry points throughout the year which can be taken on a pay-as-you-go module basis. The institution develops the content, whilst the OPM manages the recruitment, marketing and some personal tutoring. In this example, the components of the postgraduate degree have been unbundled. This

disaggregation of educational provision into smaller parts offers, in theory at least, opportunities for HE institutions to separate traditionally integrated components and reimagine new products and services (Yuan et al., 2014).

The complex relationship between unbundling and the marketisation of HE requires, however, additional clarification. To begin with, unbundling is not merely an educational concept but also a technological and corporate one; a neologism that emerged in the computing sector, with the pivotal event being IBM's separation of software and services from hardware sales in 1969. This led to dramatic market expansion and the birth of the software industry. Technology-based unbundling was also a highly disruptive phenomenon in the music and home entertainment industries. For some commentators, the disaggregation of TV and music from the traditional creation and distribution channels, and its reaggregation as on-demand digital 'content' represents a template for HE (Craig, 2015). This, however, assumes that HE and the entertainment industries operate according to similar market laws, which is not the case, as shown by research on the peculiar nature of HE markets and quasi-markets. In this regard, Marginson (2013) argues that universities will only ever be regulated quasi-markets due to some universities restricting supply to create value through exclusivity. At the same time governments still insist that HE has a role to play in promoting public good, contributing to social participation and in socio-economic and gender equity. However, the story of the last 40 years in HE in most countries has been of decreased government spending, an increasing role for the market and increased state regulation of HE, leading to hybrid funding models. HEIs are competing with each other for state funding and other forms of income, whilst private companies are eager to enter this potentially lucrative market. Against such a complex background, this chapter reports findings from the research project 'The Unbundled University: Researching emerging models in an unequal landscape'. While the project takes place in South Africa and England, this chapter presents some reflections and findings from data collection in South Africa. We present a visual mapping of the patterns of partnerships between public universities and OPMs in South Africa, to explore the terrain and the emerging 'picture'.

The South African context

The South African HE context is experiencing similar economic pressures on universities which have led to fee increases, specifically 9% per annum since 2010 in this country, making HE even more unaffordable for most students. Student protests calling for 'free' education and the call for decolonised education reveal a more contested landscape than in the UK. However, the discourse about who should pay for education is located in inequality; South Africa was deemed to be the most unequal country in the world over the past few years, based on the World Bank's Gini index estimates (World Bank, 2018). Issues of access and low throughput rates are widespread, and unequal by race: 39% of white students, enrolling in 2009, graduated in three years, compared to 20% of black students, whilst 61% of white students and 51% of black students from this cohort graduated in six years (CHE, 2016). Until recently, large numbers of students, referred to as the 'missing middle' were unable to pay fees or apply for fees funding because their family income exceeded the threshold for fee relief but for whom university education was unaffordable (Merten, 2018). In this context, access is as much about staying in and succeeding in higher education as it is about entering the system.

The system itself has been restructured to try to address its historical inequities and to concretise a policy-driven standard classification of the types of HE institutions that exist, in order to replace informal categorisations from the past and unify the sector (CHE, 2016; DHET, 2013). South African HE institutions are grouped according to the type of academic programmes offered (CHE, 2016). 'Traditional universities' offer a wide range of professional and general formative programmes at undergraduate and postgraduate levels and are active in extensive knowledge output (CHE, 2016). 'Comprehensive universities' are those institutions that combine university-type academic programmes and technikon-type programmes, with technikon referring to historical institutions focussed on vocational training (CHE, 2016). Although this standard classification resulted in a movement away from historical categorisations, and despite calls to limit further differentiation of institutions, the Department of Higher Education and Training (DHET), continues to discuss funding in relation to historical legacies (e.g. DHET, 2013 and DHET, 2014). There is an acknowledgement that for funding frameworks to contribute to the achievement of national priorities, resource allocation must include a 'disadvantage factor' based on an institution's historical status (DHET, 2014, p.4). A ministerial committee, established to review the state funding of public universities in South Africa in 2013, introduced sub-categories for institutions in order to respond to the financial challenges of the 'historically disadvantaged' institutions (DHET, 2014). Based on these historical legacies, the categorisation includes: (i) 'Historically Advantaged Institutions (HAIs)' which were predominantly white institutions championed during the apartheid era (DHET, 2014), (ii)'Historically Advantaged Institutions with Historically Disadvantaged Sites (HAI with HD sites)' which exist as a result of the mergers between traditional universities and former technikons. As a result some institutions maintain their

historically advantaged status but have campuses or sites that are considered historically disadvantaged and (iii) 'Historically Disadvantaged Institutions (HDIs)' which were disadvantaged during apartheid and remain unaffected by the mergers and reforms introduced by the post-apartheid government (DHET, 2014). New Institutions refer to three universities that were established within the last five years and have not been categorised according to historical status (DHET, 2014). (For more on the development of Higher Education in South Africa see Swartz et al., 2018)

Distance learning is seen by some, including the South African Government (DHET, 2013) as a way to increase access. As with the Open University in the UK, distance learning is not new to South Africa, with the country having a dedicated distance learning university (Unisa, University of South Africa). On this basis, and given the current austerity programs implemented in South Africa, DHET states that all universities can "expand online and blended learning as a way to offer niche programmes, especially at postgraduate level, to those who are unable to attend full-time programmes, either due to their employment status or their geographical distance from a campus" (DHET, 2013, p.51). In effect this removes the previous barrier from residential universities providing distance provision. As the funding pressures continue, some institutions have moved into the market to gain revenue, and those that previously focused on face-to-face provision are increasingly offering more flexible forms of provision, sometimes in partnership with for-profit or commercial providers. These developments are gathering pace in South Africa but there is very little empirical research about the nature, process and impact of such changes. There are a few excellent examples focused on the UK or US contexts (e.g. Komljenovic and Robertson, 2016) and, as Marginson notes (2013), there is a growing interest in the fast-developing HE contexts of East and Southeast Asia. However, there is a lack of evidence about how these market dynamics are affecting institutions in other regions of the Global South (chiefly Africa), and the role of Western and local providers or partners.

This focus is exemplified by the following research question: Does the pattern of current partnerships between universities and OPMs in South Africa suggest that unbundled provision challenges the existing differentiation of universities? In particular it is focused on the extent to which unbundling of provision has taken place in South African universities, the configuration of partnerships between such companies and universities, and whether this type of activity is the privilege of particular types of institution. We explore these patterns by creating interactive visual mappings of these partnerships, which allow the data to be clustered in several ways.

Data collection methods and methodology

Mapping to uncover new insights

Social cartography involves creating visual maps to communicate the dynamic of social change (Liebman and Paulston, 1994). Recognised as a subset of social cartography, tactical cartography involves creating interactive maps with digital tools to show the movement and arrangements of social networks for further analysis (Ruitenburg, 2007). The technique is often presented as a way of discovering power dynamics within systems (Institute for Applied Autonomy, 2008). A number of authors have developed visual mappings of market activity and public-private networks in higher education using digital social network analysis tools (e.g. Metcalfe, 2006; Sohn and Kim, 2009; Mathies and Slaughter, 2016). Visualisations mapping the dynamics of the OPM market in the changing higher education terrain have appeared in a number of blog posts by Hill (2012; 2016; 2018), with the aim of capturing the array of partnership approaches and online delivery models. However there are no such mappings of higher education institutions and their partnerships with OPMs.

Our strategy involved using our theoretical framework in the designing of the maps to inform parameters, visual features, and interactive options in order to discover patterns for analysis. Findings emerging from earlier data collection in the form of interviews and workshops with senior decision makers and senior support staff in public universities and OPMs, secondary literature from the field of higher education studies and the analysis of documents and other artefacts identified through desk research, suggest that rankings are significant. They play a key role for many institutions in decision making, and in bolstering their reputation to attract overseas students and third-stream income, while historical inequalities endure (Swartz et al., 2018). The maps we have developed cluster institutions and their partnerships by the themes of historical status and international rankings. In producing a systematic mapping of emerging partnerships between public HE institutions and OPMs, a panoramic perspective of the terrain is captured, providing an overview at a moment in time.

Methodology

This chapter draws on official sources available publicly to create a database of partnerships between public universities and OPMs, partnerships which exist to develop online provision. This database has been used to create mappings of these partnerships, explore patterns and suggest certain organisational principles according to which partnerships between certain types of actors emerge. All data sourced for these partnerships were

gathered, in the period October-December 2017 and updated in August 2018, through organisational websites, press releases, and policy documents of universities and OPMs and verified through telephone conversations with the 20 public universities included here. Data collection involved iteratively searching public databases for search terms within the scope of the project. Each university website was searched using terms 'distance', 'e-learning', 'web-based learning', 'online course', 'online programmes', 'online degree', and 'MOOC'. The distance learning policies of the universities were considered to verify that 'online learning' refers to fully online courses that do not have a face-to-face element. Courses that were advertised as online but whose course descriptions included terms or phrases such as 'blended', 'postal service', 'assessment on site', 'compulsory study days on campus' were excluded. Blended provision includes a wide range of different types of provision, which may or may not involve private partners, but does not tend to result in unbundling. This project is focused on unbundled provision i.e. provision which is fully online. Once it was established that a university does provide one or more aspect of teaching and learning fully online, it was investigated whether this is done through a partnership or independently. University press releases and media were searched using the terms 'online', 'collaborate', 'partner' and 'partnership'. Course descriptions were scanned for logos affiliated with any OPMs. In some cases, OPMs list their partners on their websites. If a university was listed on the website of an OPM, the university website was checked to verify that the partnership is still active. The systematic data collection approach has resulted in the development of a dataset that is considered to be an accurate record of partnerships in the South African HE landscape at that point in time. The dataset has been used to develop the maps using Kumu[1], an online platform for the creation of interactive relationship maps.

Visual features

There are not only static, two-dimensional maps included in the cartographic discourse but also layered, interactive and dynamic maps (Ruitenberg, 2007). By allowing users to see and explore large amounts of information simultaneously, interaction techniques in the visual analytics stimulate new insights (Thomas and Cook, 2005). Interactive visual maps elucidate some of the potential influencers within the context and make explicit connections between different actors that give rise to new phenomena or reinforce phenomena already embedded in the context (Stanley, 2006). Clustering around different categories and in different ways contributes to a disruption in preconceived notions of the terrain. Or as Stanley (2006) suggests when studying a new context "in the absence of an overall "blueprint", globally emergent patterns can arise through local interactions for the ongoing movement and unfolding of the system itself" (Stanley, 2006, p.74).

The functionality of the Kumu platform enables elements within the maps to be clustered. The interactive version of the maps that we have prepared in our larger study has used this functionality to cluster according to several variables: place in university ranking systems, type of institution according to provision and historical status, and digital education offering such as provision of online courses or the number of MOOCs on offer. Each new arrangement of the elements in different clusters provides a lens for the analysis of our research data on the links between public universities and OPMs. We return to our research question of whether newly emerging partnerships disrupt the differentiated terrain of HE in South Africa, or whether they echo differences and inequalities between institutions. The visual maps shown in this chapter explore how partnerships relate to existing classification systems used to categorise South African public universities:

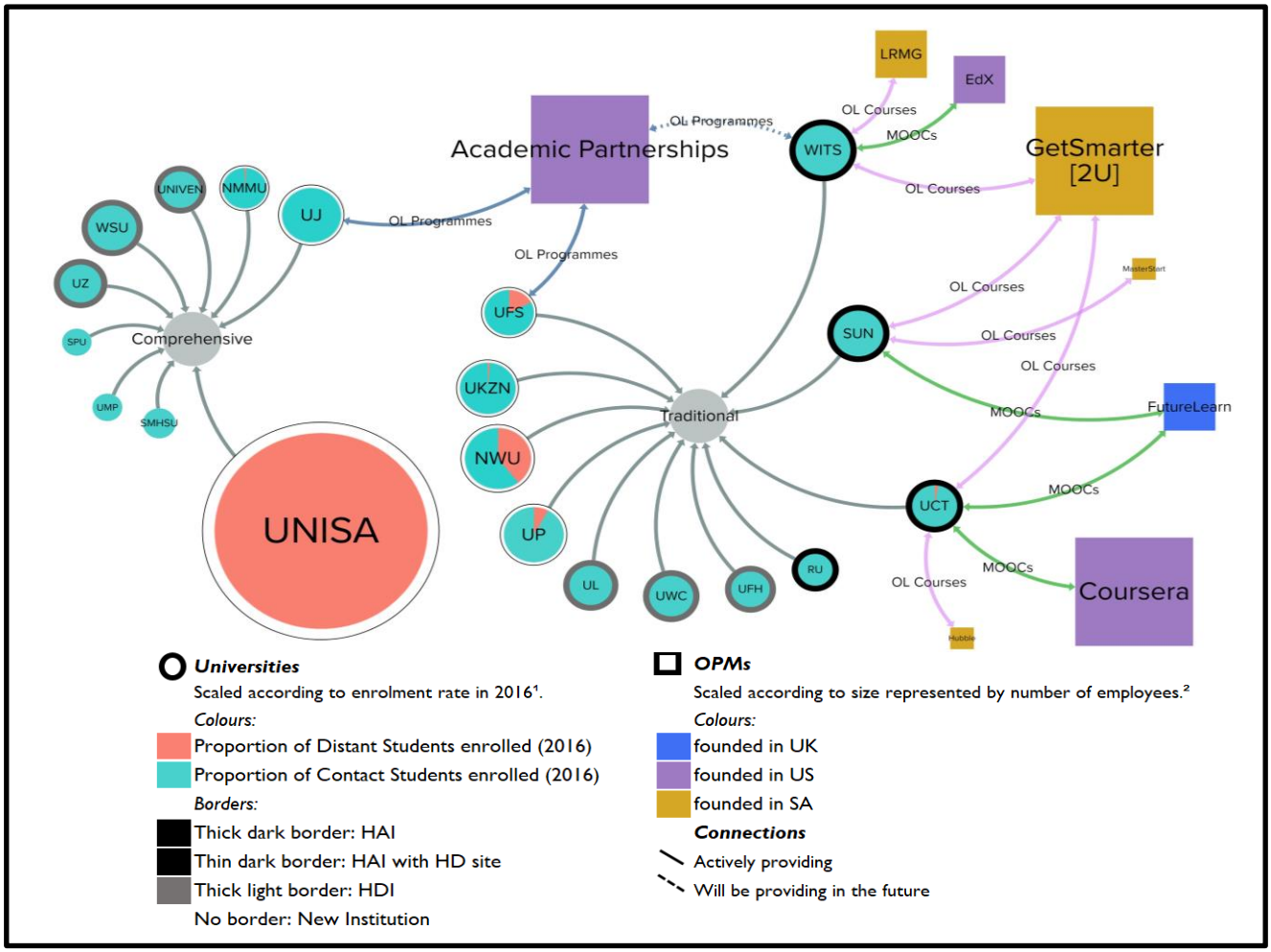
- the national system of classification that divides them into traditional and comprehensive institutions[2];
- a categorisation according to historical status (HAI, HAI with HD sites, HDI and New), as related to funding frameworks (DHET, 2014);
- a world ranking (Times Higher Education ranking) that classifies them within a global field of HE.

The maps

The two maps shown in this chapter contain information relating to the type of university, whether they are traditional or comprehensive, their historical status of being advantaged or disadvantaged, their relative size in terms of enrolment rates and ratio of contact to distant, and their global position according to the Times Higher Education World Ranking. The maps also contain information relating to OPMs active in this space, focusing on the type of provision they offer and the institutions they partner with, as well as their size and country of origin.

[1] www.kumu.io

[2] Universities of technology and private universities are excluded.



[1] DHET, 2018; [2] Data about companies are found on their websites and social media platforms (such as LinkedIn).

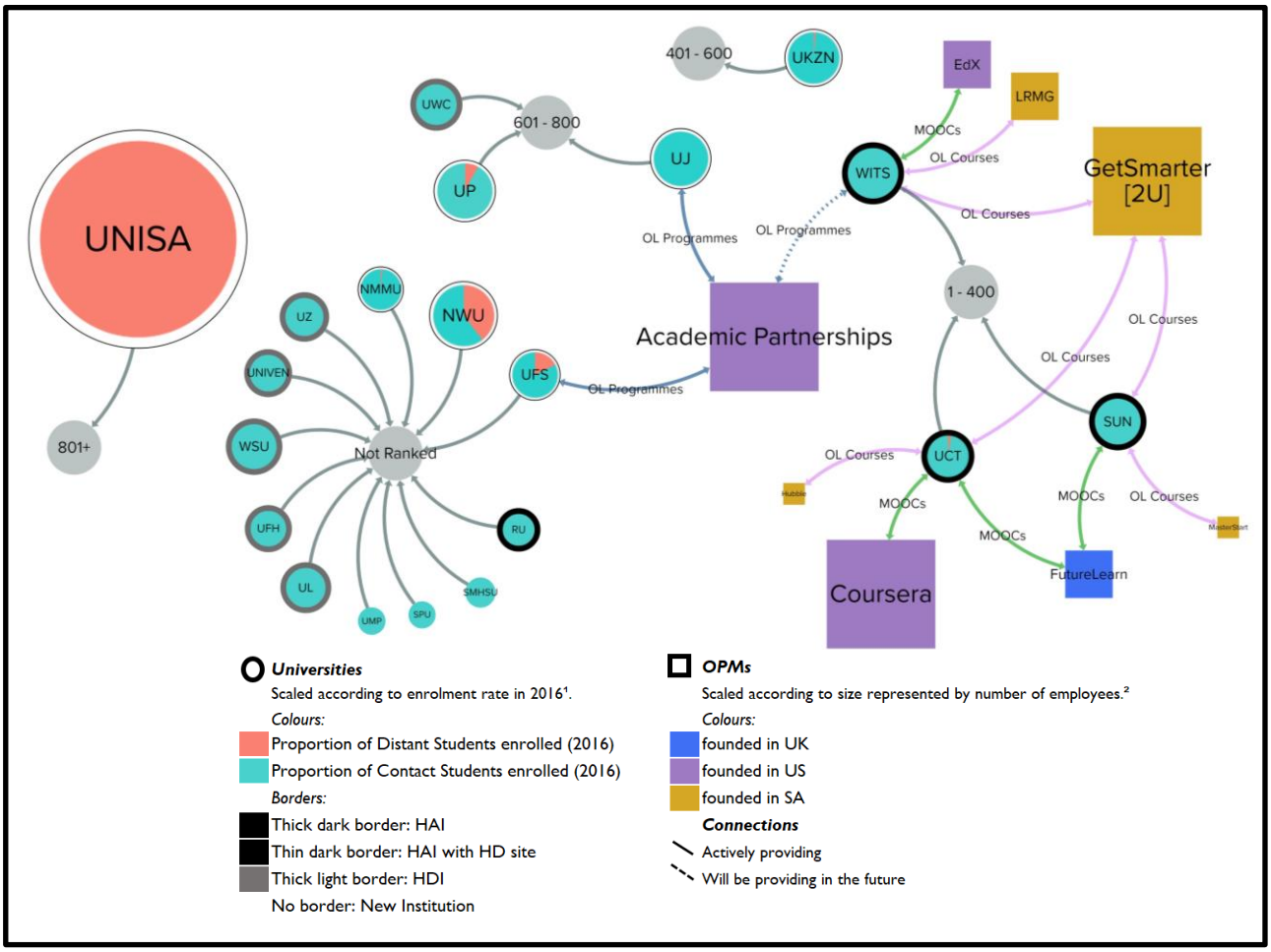
Figure 2: University and OPM partnerships clustered according to institution type

Figure 2 is a mapping of the relationship between public universities and OPMs according to the institution type (traditional versus comprehensive). We can see immediately that OPMs are active in the South African HE terrain. They consist of companies founded in the US, UK and in South Africa, utilising digital technology to provide - in partnership with certain institutions - MOOCs, online programmes and online courses. However, the map shows that this type of activity is not taking place across the whole South African HE terrain. Four of the 11 traditional universities have partnerships with OPMs (University of Cape Town (UCT), Stellenbosch University (SUN), University of the Witwatersrand (Wits) and the University of Free State (UFS)). Of these universities, UCT, SUN and Wits are all HAIs (DHET, 2014), and partner with multiple OPMs. UCT partners with four different companies, FutureLearn and Coursera to provide MOOCs, and GetSmarter and Hubble to provide online courses. Wits partners with four companies also, edX to provide MOOCs, GetSmarter and LRMG to provide online courses, and Academic Partnerships to provide online programmes. SUN partners with three companies, FutureLearn to provide MOOCs, and GetSmarter and MasterStart to provide online courses. The fourth traditional university to partner is UFS, a HAI/HD (DHET, 2014), which partners with Academic Partnerships to provide online programmes. Some of the OPMs partner with more than one university: FutureLearn partners with two HAI universities, GetSmarter partners with three HAI universities, whilst Academic Partnerships partners with the University of Johannesburg (UJ), a comprehensive university as well as two traditional universities, one a HAI (Wits) and one a HAI/HD (UFS). The remaining seven traditional and eight comprehensive universities do not have any partnerships with OPMs. This map shows that OPMs are

working predominantly with a specific type of institution: traditional HAIs. The two exceptions are a traditional HAI/HD (UFS) and a comprehensive HAI/HD (UJ). The distinction becomes even clearer when considering which universities do *not* have any partnerships, these being predominantly HDIs or HAI/HDs, although it includes one HAI, Rhodes University (RU). The mapping also illuminates the volume of partnerships, showing that the three institutions that engage in a high number of partnerships are the traditional HAIs.

Given that one of the drivers for developing online provision is to provide more flexible access to students who may not be able to attend a campus-based course, it is of interest to explore the relationship between the development of online provision and the existence of a distance cohort. Based on the most recent contact versus distance enrolment statistics (for the academic year 2016, DHET, 2018), the 11 traditional universities have predominantly contact enrolments (campus-based students). Five of these (UCT, UFS, University of Pretoria (UP), University of KwaZulu-Natal (UKZN) and North-West University (NWU)) have varying proportions of distance students. Of the nine comprehensive universities, one is fully distant (University of South Africa (UNISA), seven are fully contact enrolments, and Nelson Mandela University (NMMU) has a very small proportion of distant students. Six of the comprehensive universities with no distant students also have no partnerships to offer online provision. Two of the HAI traditional universities which partner with OPMs (SUN and Wits) to offer MOOCs, online courses and online programmes do not have distant students, although the other, UCT does. Interestingly, in the first iteration of this map (completed by December 2017 and based on enrolment data from the academic year 2015), we did not find any evidence of a distant cohort at UCT, which by August 2018 (based on enrolment data from 2016) had appeared, potentially as a response to the existence of online provision developed in the last two years. However, the mapping shows little relationship between partnering with private companies to develop online provision and the existence of a distance student cohort yet. This suggests that online provision is not only being developed for existing distance students but as an attempt to grow this cohort and possibly to support campus-based students. As reports are published with updated enrolment figures, we expect to see a slightly larger distance cohort at UCT and emerging distance cohorts for SUN, Wits and UJ, as they offer more short courses and programmes online. In contrast, the comprehensive universities who may want to exploit the distance market are not forming partnerships to develop online provision, with the exception of UJ. UNISA, fully distant, does not offer any standalone fully online courses or programmes. The university does provide some course content online, an e-library and online submission tools as well as offering some modules online, as part of a programme. However, the provision is a blended offering, as the institution conducts compulsory exams and assessments at their numerous sites, and is not fully electronic, relying on telecentres and courier services for distribution of materials (Unisa, n.d.). The institution does not partner with an OPM, which may be due to OPMs not approaching Unisa or it may be due to the institution eschewing any such approaches.

The differentiation of the system in global terms, as expressed through relationships with OPMs, is also evident when we examine the HE system in South Africa through the lens of global rankings. In Figure 3, universities are grouped according to their Times Higher Education (THE) World University Rankings 2017/18: a ranking system that is based on teaching, research outputs and citations, industry outcomes, and international outlook of universities (Times Higher Education, 2018). In the map, universities are sorted into five main groups: 1-400, 401-600, 601-800, 801+ and not ranked (not in the 1,258 THE globally ranked universities). It is clear that universities which are highly ranked (UCT, SUN and Wits) engage in partnerships with OPMs, UCT and Wits, each with four companies and SUN with three. UJ, ranked 601-800 partners with one company. The lowest ranked (801+) universities and those not ranked have only one instance of a partnership between them, UFS with Academic Partnerships. The three highest ranked universities in South Africa and the only three in the top 400 globally, UCT, SUN and Wits, are collectively partnered with all nine of the OPMs currently active in the terrain.



[1] DHET, 2018; [2] Data about companies are found on their websites and social media platforms (such as LinkedIn).

Figure 3: University and Private Company partnerships clustered according to THE Rank

The two mappings shown here are clearly interrelated, indicating that those universities which are highly ranked are also traditional HAIs (UCT, Wits, SUN), with one traditional HAI (RU) amongst those not ranked.

Conclusion and next steps

Mapping the OPM phenomenon across an entire sector reveals new ways in which networks around teaching and learning might manifest in light of digital affordances and disruption, emerging markets and the existing inequalities in a specific context. By illustrating some of the increasing plurality of HE provision, we reveal how online solutions, and the networks created to provide them, may echo offline disparities. Particular institutions are able to partner with multiple OPMs to provide MOOCs, online courses and online programmes, suggesting they are not only being approached by multiple companies but are able to choose which company to partner with for each offering. These patterns of partnership echo the existing differentiation in the system, in terms of OPM activity being almost exclusively located within traditional HAIs, with high international ranking, reputation and thus recognisable brands. Such partnerships do not disrupt an unequal terrain, but rather reflect and possibly reinforce the asymmetries already at play. These findings raise important questions about the introduction of digital technology for teaching and learning. However, further analysis of our data is required to enable an exploration of how these partnerships and the associated provision impact on teaching and learning. The mapping of the terrain at a broader level is not a statistical exercise but rather a way of using publicly available information to gain a 'snapshot' of a rapidly changing landscape. Instead of two distinct research stages, the interaction between the broader overview (the mapping) and the stakeholders' insights (data collection through interviews) is iterative and will serve loosely as a method of triangulation. In terms of

analysis, the maps provide a broad view of the terrain to provide context for the data gathered through qualitative methods. Building upon and enhancing the foundational mapping, the patterns that have revealed themselves point to questions to be explored with the qualitative analysis opening up spaces for the voices of the participants and stakeholders. This landscape is undergoing rapid change and new OPMs are entering the terrain, as others exit. Private companies already in the HE sphere are expanding their role, with MOOC platform providers increasingly offering and performing online programme management activities, concerned to demonstrate value to the sector. MOOC and short course credits are increasingly portable to full online programmes, as a way of encouraging learners to go further on their pathway as well as to provide flexibility. Such partnerships with HEIs are likely to flourish and become closer in the future. Mindful that it is early days for these new private/public relationships, it will be valuable to track which types of institutions form these networks going forward, which grow internal capacity and in which ways, and which are not active in the unbundled digital sphere. Particularly relevant are the implications for agendas to address inequities both in the system and for the student experience.

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