Mapping provision in HE: the present and the possible

Report for the New Higher Education Institutions (HEIs) Project
of the South African Department of Higher Education and Training

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March 2022

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INTRODUCTION

This paper is about Higher Education (HE) teaching provision in terms of a) its language and key concepts b) the types, modes and means presently in existence in South Africa and emergent globally and c) the implications for policies and regulatory frameworks.

The context of the discussion is a global HE sector characterised by the following key trends.

- There is a drive towards increased flexibility of provision especially from employers and students
- Networked digital technologies are a key component of emergent types and modes of provision
- There is a tension between informal learning practices and formal offerings
- Attention is being paid to pathways between levels of formality, particularly between semi-formal and formal offerings, leading to the development of new types of offerings
- Current South African national regulatory frameworks are out of sync with and have not kept up with emergent opportunities and innovation

This papers has three parts.

Part 1 explains the key terms relating to provision, shows where there is general agreement about key aspects of those terms and identifies where there are areas of confusion. This part also describes these terms in relation to current South African policy and regulatory frameworks.

Part 2 maps the changing terrain of provision indicating the emergence and the possibilities of new types globally. It looks at the three types of provision – formal, semi-formal and informal- in terms of issues, modes and means. It articulates the boundaries, between different types of provision; of special interest are where these boundaries are becoming porous. Part 2 also looks the nature of new modes as well at how the means of provision are changing.

The conclusion outlines the implications for the policy and regulatory environment in South Africa.

The paper uses a framework comprising types and modes of provision (Figure 1). The concept of formality is used to differentiate types of provision with formal types of provision being accredited, semi-formal types of provision being recognised in some way, and non-formal types being neither accredited nor recognised. It also uses the term mode to describe the continuum of provision between fully face-to-face and fully online. The ways that types and modes of provision do and can intersect are shown by dotted lines. This is the arranging framework to organise this paper, with comments about the means of provision included in each section.

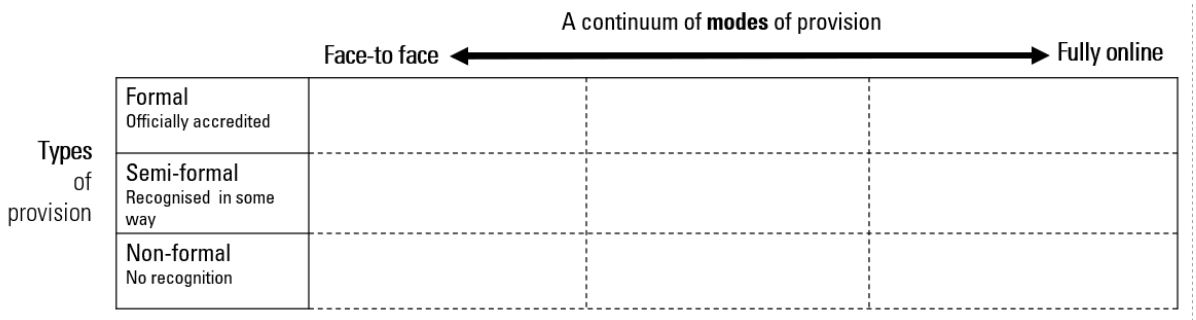

Figure 1. *Framework for types and modes of provision*
Original versions in Czerniewicz et al., 2014; Walji et al., 2016

Figure 2 (below) shows that even before the pandemic brought the digital to the fore in higher education, there had come to be a confluence between face to face and distance modes of provision with these new modes enabling new types of provision. Thus, despite extreme inequalities and unevenness of provision , it was possible for the Department of Higher Education and Training (DHET) to promote emergency remote teaching (ERT) when the pandemic began.

There is widespread agreement amongst higher education scholars that digitally-mediated modes of provision will continue to be central from now on partly because of the changes already taking place prior to the pandemic and partly because of the catalyst of the pandemic-induced pivot online.

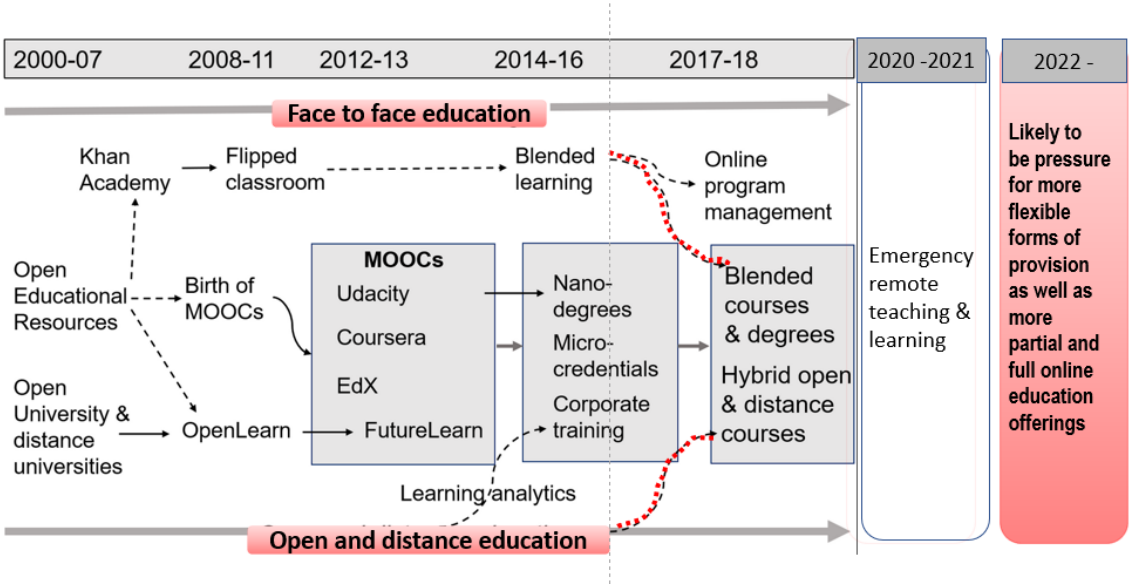

Figure 2: A chronology of the confluence of face to face and distance education, with new modes of provision. Adapted from Sharples https://twitter.com/sharplm/status/1034562474064924682

PART 1: KEY CONCEPTS AND TERMS

The changing terrain of teaching and learning provision has spawned a proliferation of terms, most of which do not have unanimously accepted definitions, particularly as colloquialisms have developed.

The same term may well be used differently across the entire sector; indeed it may be that there is no consensus even within the same institution.

This means that when document is read or written it is necessary to have a shared understanding of what these concepts are. Key terms must be defined at the outset when writing and checked when reading.

To further confuse matters, some terms have very specific regulatory definitions which are neither widely used nor understood. When these exist, they are noted in this paper especially as they are likely to have consequences for practice. However, it cannot be assumed that these regulatory definitions are known or utilised.

Technology

Over time, there have been four categories of technology: analogue, digital, networked digital and SMART technologies (the latter being an acronym for Self-Monitoring, Analysis and Reporting Technology). Although developed chronologically, they all still exist today in HE institutions in different contexts in South Africa and coexist in many places.. Their take-up reflects the stratified system in which technologies in South Africa and elsewhere are enmeshed.

Analogue technologies are non-digital; in classrooms these include the non-electronic such as pencil, paper and the like as well as electronic (non-digital) technologies such as overhead projectors.

Distance education in South Africa has long been associated with (analogue) paper course packs posted to students.

Digital technologies have microprocessors using binary numerical systems to represent data. Here computers offer one to one access to information; the device is a gateway to an abundance of information. Examples include language laboratories and CD ROMs. Such non-connected technologies were a precursor to the networked technologies which marked a profound change to teaching and learning, albeit unevenly articulated. These non-networked digital technologies are still used in South African HE institutions today.

Networked digital technologies change the terrain dramatically through the ability to connect machines and people, thus offering technology as a social medium, potentially an extension and growth of learning communities. Networked digital technologies loosen time- and place-bound limitations of earlier modes of delivery, although they do not fully untie them. For the possibilities of networked technologies to be realized, adequate devices and connectivity are a basic requirement.

SMART technologies lie at the heart of the current vision of the Fourth Industrial Revolution - "a fusion of technologies that is blurring the lines between the physical, digital and biological spheres (Schwab, 2016) - which is central to the South African state's vision for society and education. Smart technologies use some form of artificial intelligence (AI) or automation to interact, share, inform, monitor or modify users' behaviour and data. These technologies may be described as The Internet of Things (IOT) and include, for example, smartboards, student tracking devices, automated attendance systems and tutor bots. Such technologies have been leveraged to argue for revising curricula for digital futures as well as using AI to change pedagogy.

Formality

Formality refers to the ways that types of provision are recognised.

This paper differentiates the categories of formality as follows:

- formal types are credit-bearing, linked to a qualification, accredited by a quality council and are part of nationally-recognised systems and frameworks ;
- semi-formal types are recognised in some way but not accredited; and
- non-formal are neither accredited nor recognised, yet have an underpinning structure or design some way.

Note that informal learning such as through daily life, peers, a community etc. is not included here, although it is, of course, important and valid.

SAQA's revised Policy and Criteria for Credit Accumulation and Transfer within the National Qualifications Framework (NQF) (as amended 2021, p.5-6) defines formal learning as "'learning that occurs in an organised and structured education and training environment, and that is explicitly designated as such".

It is interesting that in SAQA's 2014 Policy for Credit Accumulation and Transfer within the National Qualifications Framework, the definition of formal learning had an explicit reference to the link with qualifications viz: "leads to the awarding of a qualification or part-qualification registered on the NQF". However, this connection between formal learning and qualifications was removed in the 2021 version (CHE, 2021).

SAQA's revised Policy Criteria for Credit Accumulation and Transfer within the NQF (as amended 2021, p.5-6) defines informal learning as "Learning that results from daily activities related to paid or unpaid work, family or community life, or leisure; it can include deliberate self-teaching".

This same document defines non-formal learning as "Planned learning activities not explicitly designated as learning towards the achievement of a qualification or part-qualification; it is often associated with learning that results in improved workplace practice and can include deliberate self-teaching or with educational offerings provided by non-governmental organisations." This overlaps with what semi-formal learning in this paper,

which is the area where new forms of credentialing and global frameworks have been and continue to be set up. Many of these are developed in close liaison with industry partners as discussed later.

The literature sometimes categorises everything that is not formal as non-formal. This loses the important distinction between alternative form of recognition and offerings with no recognition at all. While non-formal is broadly speaking indeed that which is not formal it comprises: forms of learning which are recognised in some way (semi-formal), forms of organised and structured learning which receive no recognition (non-formal); and completely unstructured learning (informal)

In summary

	SA policy	**Emergent types of provision**
Formal	Credit-bearing, accredited by a quality council and part of nationally recognised systems and frameworks Note that the SA policy documents no longer make an explicit link to qualifications	Credit-bearing, accredited by a quality council and part of nationally recognised systems and frameworks However, there is an explicit link to qualifications
Semi-formal	SA policies do not deal with emerging forms of recognition such as credentialling and stackability. There is no semi-formal category Form of movement from the non-formal to the formal is through Recognition of Prior Learning (RPL) processes.	Recognised in some way but not accredited Called credentialized when recognised by an educational institution Called recognised when acknowledged by other structures and institutions Often a gateway into formal offerings
Non-formal	Planned learning activities not explicitly designated as learning towards the achievement of a qualification or part-qualification; learning that results in improved workplace practice; can include educational offerings provided by non-governmental organisations.	Neither accredited nor certified, yet with an underpinning structure or design of sorts. For example, a single component of planned learning such as an activity or a textbook.
Informal	Learning from daily activities including self-teaching	Informal There is no planning or design for recognition

Table 1: Current South African policy definitions of types of provision compared with global emergent forms of provision

Mode

The mode of a course or qualification is sometimes described as the method of delivering teaching. The term "delivery" is problematic because it suggests "handing over" knowledge as a fixed entity rather than engaged learning. DHET describes the delivery mode as being the mode through which the student interacts with institutional lecturers or supervisors. It is the mode which determines the medium through which the teaching and learning happens. Reference to the mode at this moment in HE generally refers to whether and how teaching and learning happens online.

According to 2014 DHET documents there are only two models: contact and distance.

> Contact mode: The course involves personal interaction with institutional teachers or institutional supervisors, through lectures, tutorials, seminars, practicals, supervision, or other forms of required work, and occurs at the institution's premises or a site of the institution.
>
> Distance mode: The interaction with institutional teachers or institutional supervisors is undertaken through "distance education" techniques (eg through the use correspondence, telematics, or the internet).

There were previously three modes: contact , distance and mixed-mode. Ironically, given the global drive towards flexibility, the mixed mode option was dropped in 2014.

Thus the current modes as defined by DHET are binary and do not capture the affordances of digital media for offering varied and flexible provision. The current designated modes have a direct impact on funding which constrain explorations of flexibility and innovation.

Face-to-face mode

Face to face mode can also called "in person" or "contact" mode.

The assumption with face-to-face provision is that it is synchronous, and bounded by time and place, hence within a fixed calendar on campus.

Sometimes a distinction is made between using or not using digital technologies at all. Thus, the terms digitally-mediated or technology-enabled in person teaching.

Face-to-face provision is increasingly likely to be supported in some way by digital networked technologies. This may for example flipped classroom approaches, the use of digital resources and so on, and is one way that blended learning is understood to occur.

In South African legislation, face-to- face is called **contact mode**. This assumes personal interaction with institutional lecturers or institutional supervisors and occurs at the institution's premises or a site of the institution.

Distance education

There is general agreement that distance education separates the educator, the student and the physical learning and teaching environment.

Traditional distance education is asynchronous with no or occasional design for students and staff to meet in person. As distance education has shifted online, some synchronous online activities have been possible, although these have been constrained by access inequities and time zone differences.

Although distance and digital are quite often conflated, it cannot be assumed that distance education uses networked digital technologies; thus distance education does not equal online education. Distance education has historically been postal and paper based.

In South Africa, while the DHET's 2014 "Policy for provision of distance education in South African universities in the context of an integrated post-school system" acknowledges continua of pedagogy and modes, it does not consider online as an essential strategy for distance education.

Whether or not a qualification is accredited as contact or distance has real financial consequences. For the input subsidy (the subsidy received for students registered in courses) at NQF 5-8 the input subsidy is halved. At NQF 9 and 10 (Master's and doctoral study) there is no impact on input subsidy nor is there any impact at any level for the output subsidy (the subsidy received for students who graduate) based on mode of provision.

Online education

In defining the term "online education" one needs to differentiate between fully online and partially online.

A fully online programme or course would include online assessments and online examinations, so that the entire qualification can be undertaken at a distance from the awarding institution.

Many online programmes include an in-person examination. Any document using the terms online programme or online course need to be very clear about the parameters, especially whether exams and assessments are online too or not. When there is any face to face aspect, like exams or laboratory sessions, it is more accurate to say "partially online".

Online education may refer to a qualification or to a course. In South Africa, this is a relevant distinction because of the difference in subsidy between distance and contact provision. Within a programme, it is possible for a course to be offered fully online with no impact on output subsidy. If a course is coded as distance it receives half the input subsidy.

There is no specific definition of online education in the SA policy documents. The 2013 White Paper for Post-School Education and Training talks of "e-learning" which exists "on a continuum, ranging through categories including digitally supported, digitally dependent, Internet-supported, Internet-dependent and fully online" (2014a, p. 49).

The White Paper uses the terms "blended" and "online" learning together saying that they would be a way of offering niche programmes, especially at postgraduate level (DHET, 2014a, p. 51).

Blended learning

Blended learning is widely used but can mean different things. It is sometimes used interchangeably with online education. Generally it means a blend of some kind - but which kind of blend is not always clear.

There is general agreement that blended means a mixture of face-to-face place based learning and teaching and online teaching and learning. This can happen at different levels of a qualification or course and in different configurations.

Blended can mean that a largely face to face form of provision has a digital component. Thus, a face-to face or contact course can be blended, for example if it uses a flipped classroom approach. Blended in this case means supported by technology.

Blended can also mean that some classes/courses are online and some are in person. This is also often known as **hybrid**. These two terms are often used interchangeably.

In South Africa, until recently block release programmes were not blended. But when the periods between block weeks include teaching and learning activities online, the programme can be described as blended. A blended block may combine intensive face-to-face sessions as one day or half days with regular online tutorial/seminars for activities and interaction as well as online content and resources.

The pandemic saw the rise, especially in the United States, of **hyflex** provision. In this case the course offering is offered simultaneously in person and online, and students may choose which to attend. The educator is thus teaching both in person and virtually at the same time.

A rare use of the term blended is to describe courses which blend both synchronous and asynchronous teaching strategies in online courses and programmes as per example described in the Commonwealth of Learning model (see Cleveland-Innes & Wilton, 2018).

Hybrid education

Hybrid education and blended learning are often used interchangeably.

Hybrid education often means that students attend some classes online and some in person. This can happen at the level of the course or the programme. These interactions may be either synchronous or asynchronous

However, hybrid learning less frequently refers to the kind of digitally-mediated support described in the previous section where technology is used to support face-to-face teaching.

Remote education

Provision being described as "remote" was rare; the term only became popular at the outset of the Covid-19 pandemic when Emergency Remote Teaching became the default response to university closures (Hodges et al., 2020). This was an acknowledgement that the speed at which face-to-face provision moved online made it impossible for the normal planning required for proper online education to be implemented.

Qualification

A qualification can be defined as the formal recognition and certification of learning achievement awarded by a higher education institution and that is registered on the HEQSF the South African NQF (CHE, 2021).

A qualification is sometimes confused with a **programme**, which can be defined as a purposeful and structured set of learning activities designed to enable a student to meet the outcomes necessary for the award of a qualification.

Accreditation

Accreditation refers to the process of a qualification being approved. In South Africa this involves a detailed protocol: approval from the university, then DHET which evaluates and approves whether that qualification can be included in the programme and qualification mix, i.e. whether and institution will be allowed to offer the qualification, and for which subsidy can be gained. After DHET approval, universities apply to the quality council, the Council on Higher Education (CHE) through its statutory committee, the HEQC for accreditation. All qualifications are registered on a South African Qualifications Authority (SAQA) database which provides the record of legitimate qualifications.

Various professional bodies in South Africa, such as the Engineering Council of South Africa (ECSA) and the Health Professions Council of South Africa (HPCSA), have at the core of their mandates, the accreditation of qualifications on offer at universities that lead to a profession, like an engineer or medical doctor.

An additional consideration is the need for dual accreditation in professional qualifications. The CHE will not accredit such qualifications if they are not also accredited by the relevant professional body, even if they are not a statutory body.

Certification

Certification is often confused with accreditation, but refers only to the document students are provided with if they are awarded a qualification or part qualification that is registered on the NQF.

Such certification is usually a 'license' to practice and is granted on the basis that the necessary HE-based qualification has been successfully completed – to allow entrance to professional training and education, that is assessed by the professional body.

Recognition

Recognition means acknowledgment and acceptance as valid quality learning. Learning outcomes (LOs) are formally acknowledged by a learning provider through the act of issuing a credential to the learner usually on the basis of a completed assessment. Learning outcomes (LOs) can also be recognised by an educational institution (which has or has not provided the learning offer) or an employer formally granting the learner the right to access or progress in educational or employment activities.

Recognition has five dimensions (Witthaus et al., 2016):

1. Learning outcomes being issued a **credential** – a formal acknowledgement- by an institution, on the basis of a completed assessment. These credentials may be at a granular level below that of a course in a formal system in which case they are called **microcredentials** (see below). In South Africa, microcredentials do not yet exist. Where they do exist, microcredentials may also be combined in which case they are called **stackable.**
2. Credentials being accepted at an educational institution as a valid proof of learning, and in some cases being regarded as equivalent to formal credits towards a qualification
3. An employer accepting the credential as valid for entry to professional employment
4. Acceptance by society in general as credible and authentic
5. **Recognition of prior learning** as access to formal qualifications and formal courses is a form of recognition with explicit regulation policies RPL does not require a credential

Microcredentials

These are credentials in forms which are recognised by institutions and externally. They are competency-based which means they are linked to skills, hence they are largely professional and vocational.

Microcredentials allow students to gain recognition for smaller units of learning rather than having to complete an entire degree or diploma before being certified. These small units can be recognised in various ways especially through **badges** and digital badges.

Open courses can be combined in various ways; commonly known as being stackable. This is an emergent space where there is vying for stackable combinations and forms to become dominant as well as for brand names to become proprietary eponyms (the way that "to google" has become a generic term for searching online, when Google is simply one very rich private company, and there are other search engine options which exist).

> Nano-degrees are combinations of vocational courses offered by Udacity, which states explicitly that these are offered with industry partners and are not accredited.
>
> Specialisations are offered by Coursera (at the time of writing there are more than three hundred of these).
>
> Micro masters are offered by EdX 2U and others and are not formally accredited qualifications as in the formal sphere.
>
> Expert Tracks are offered by the Futurelearn platform as a set combination for specialist skills. Students receive digital certificates.

Microcredential frameworks are developing apace globally and are forming a world of their own in the semi-formal space.

Importantly, they can also provide a gateway into the formal sphere of accredited qualifications (where they sometimes called macro degrees).

In some cases, microcredentials can be credit-bearing parts of an existing degree, which can provide access to that degree.

South Africans may relate microcredentials to the 'unit standard' idea, which raised the concern about loss of coherence in competency development that would normally characterise a 'qualification'.

Course

A course is collection of teaching and learning activities designed by educators.

It may be stand alone and self directed, which means that students can take an online course without an educator being synchronously present. These are sometimes called **self paced**.

The fact that a course is **designed** for specific **outcomes** makes it different from a curated set of resources, even one which includes recordings of educators lecturing on a disciplinary topic.

Courses can be credit bearing or non credit-bearing.

Credit bearing courses are part of accredited qualifications.

Non credit bearing courses are not part of accredited qualifications. Nevertheless it is clear that there is increasing acceptance of non credit bearing courses if there are appropriate quality assurance mechanisms in place. Such courses are often used as part of alternative frameworks.

They may also be accepted as being "credit-worthy" and therefore used as gateways into formal qualifications. It is in this instance that the firm line between formal and semi-formal is breached.

PART 2: MAPPING TYPES, MODES AND MEANS OF PROVISION

Formal provision

This section describes the current regulatory situation in South Africa and considers it in relation to global trends. It also considers modes and means of formal provision.

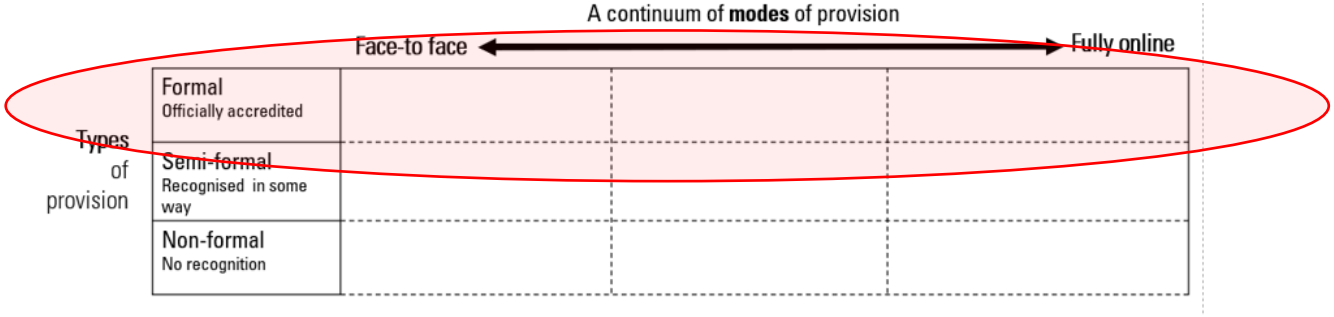

Figure 3: Formal provision

Formal provision in South Africa is determined by the National Qualifications Framework (NQF) Act (2008). This comprises three sub-frameworks: the Higher Education Qualifications Sub-Framework (HEQSF) (2014), the General and Further Education and Training Qualifications Sub-Framework (GFETQSF) and the OQSF. The relationships between them are spelt out in the Government Gazette No 44031 (2020).

The HEQSF aims to provide one single integrated framework through which qualifications from all higher education institutions (HEIs) in South Africa, irrespective of their different historical backgrounds, would relate to one another and to facilitate access, articulation, credit accumulation and transfer (CAT). The National Plan for Post-School Education and Training (NPPSET) 2019 – 2030 provides a roadmap to build a highly coherent, integrated and well-coordinated and articulated PSET system (CHE, 2021).

The forms of qualifications are: post-graduate diploma, Masters degrees (2 types), Higher certificate, doctoral degree, Diploma (2 types), Bachelors degrees (3 types), Honours degrees, advanced certificate and advanced diploma.

The system goals inter alia aim to provide an improved interface between education and training institutions and the world of work as well as enhanced recognition for different forms of learning to expand equitable access by all sections of the population to quality education.

Modes of formal provision

Face to face mode

Traditional university teaching assumes face-to-face to mean lectures, seminars, tutorials, laboratories in the same place at the same time, where students and educators 'share oxygen'. As noted in Part 1, face-to-face teaching is also called "in person" or contact mode, the latter being the term used in SA policy frameworks.

Sometimes a distinction is made between using or not using digital technologies in residential universities . When education is described as "digitally-mediated" or "technology-enabled", it is referring to face-to-face teaching supported by various kinds of technology.

Online mode

As described earlier, online modes of education can be fully or partially online, and can be online at a course or a programme level. This means that it is possible for a residential contact programme to include a fully online course; examples exist in South African universities.

It is worth bearing in mind that distance education does not equal online education in the sense that distance education can use other non – digital modes, such as paper course packs. On the other hand, a fully online programme or course can be offered as a distance course within certain parameters.

In the online mode the interaction between students and educators, and between students themselves takes place in virtual learning spaces, platforms known *inter alia* as virtual learning environments (VLEs) or online learning environments (OLEs).

Online teaching and learning may be synchronous where students and educators meet virtually at the same time. This is a design choice especially if video is used, as students generally have unequal access to data and connectivity. Time zones may also be a consideration.

Online teaching and learning may also be asynchronous where engagement happens at any time. Here interaction may be text only, or could include videos for students to watch in their own time. It is easier to design for low resource or inequitable contexts using asynchronous methods.

Mixed mode

Mixed modes are also referred to as **blended** or **hybrid**, as described earlier.

Modes can be mixed at the level of a qualification in which case the entire qualification is online (fully or partially depending on whether practical laboratory sessions and/or the exam is also online). In current policy frameworks this would be defined as distance mode.

Modes can also be mixed within a qualification where one course is offered online while the other courses are face to face.

A course or programme can be offered in **hyflex mode** whereby it is offered both face-to-face and online simultaneously. In the most complete sense of hyflex provision, all students, whether in virtual or physical environments are able to engage with each other and the educator. This requires additional facilitation and is complicated to manage. A simpler hyflex version, where the class is taught in a physical environment and streamed synchronously to remote students who can see but not participate.

Modes are increasingly mixed within a course or a class; this is called technology-enabled or digitally mediated; it is even sometimes called blended learning. These confusions of terminology are described earlier.

Means of formal provision

How is teaching and learning provision organised, prepared and designed?

In formal analogue university teaching, academics and tutors do everything, with perhaps, some advice from an appropriate academic development centre. In a pre- digital era they may have used technology such as overhead projectors. As the mode of the offerings change, new roles and new arrangements have come into existence

Platforms

Learning management systems (LMS) are now essential infrastructure for all universities. Which platform is selected is a complex decision which includes whether the platform is intended to largely serve internal students and support blended learning, whether it is intended to support fully online degrees, or whether it is intended to do both. It is of note that external private platforms (such as Coursera) which were originally set up to support professional learning and open online courses, are now also used for full degree programmes by some universities internationally.

There are a number of technical, financial, legal and pedagogical complexities to be considered, in terms of, for example, the capabilities of platforms and linking to other systems: the costs, licenses and affordances involved and so on. This kind of infrastructure is essential in all universities; however introducing and maintaining them involves complex capabilities and may further differentiate an already stratified HE sector.

New roles

Different kinds of offerings require different capabilities. Academics and educators themselves find that their own teaching roles and relationships change; not only do they need new capabilities but they increasingly need to work in teams. A key role is that of a learning designer, who works with educators to design learning experiences, and has expertise in the kinds of technologies which can do so. Other roles include media specialists such as videographers, digital resource curators and so on. The imperatives of professional development are getting a great deal of attention in the scholarly and policy literature, with many universities, even in South Africa, requiring academics who teach to prove professional teaching competence.

New arrangements

As new capabilities are required, universities are making new arrangements to provide them.

Decisions about enabling emergent modes are taking place in a broader context where teaching and learning is becoming unbundled, thus aspects of educational provision are disaggregated into smaller parts which can be provided as distinct services.. Figure 4 below

shows the different components and services comprising online provision, each of which could be unbundled and offered by separate companies.

Many universities, including a number in South Africa, are developing arrangements with companies called **Online Programme Managers** (OPMs). In South Africa, these have generally been through "partnership models" whereby profits are shared by the university and the companies, but it is also possible that arrangements can be through fees-for-services models (Czerniewicz & Walji, 2019).

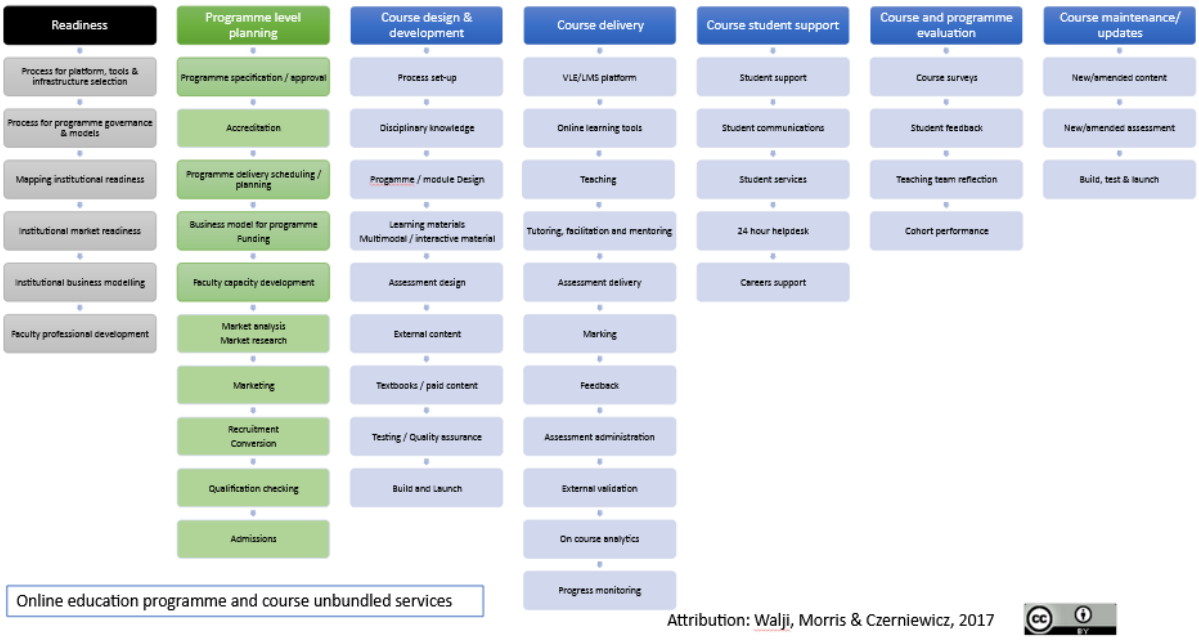

Figure 4: Online education programme and course unbundled services

The unbundling of online provision components has several implications including the rebundling of those parts into new forms of provision, and the delivery of those parts by providers outside the university introducing different types of relationships between public universities and private companies.

In South Africa, there is no national policy oversight of these arrangements with OPMs. The lack of attention risks the exploitation of universities, academics and students. It also risks further stratification of the sector in that only certain universities have the capacity to both develop in -house expertise and to form relationships with private companies. Better resourced institutions are therefore in a better position to develop more flexible forms of provision. The lack of oversight also has other consequences including that educational-specific requirements may be omitted in more general regulations pertaining to data, privacy etc.

These new arrangements are starting to receive scholarly attention, particularly in terms of the implications for state oversight. Researchers in the US (Cheslock et al., 2021) attribute the lack of oversight to eligibility ambiguity, presumption of full institutional control, and unknown operational details. They suggest that five existing regulations that could be modified to include oversight of OPM arrangements with universities: incentive compensation, program outsourcing, substantive change, written arrangements, and consumer protection. They also argue that new policies are needed, some of which are underway in the US: these pertain to transparency, the disclosure of information and privacy. Attention to the relevant SA regulations is urgently required in order for some fairness across the sector.

The sector is seeing the growth of in-house development, even when working with private companies. Such i**nhouse** capacity building sees the retraining of staff and the employment of staff with new skills sets. It also sees the creation of new structures and / or the reorganization of existing structures (see Czerniewicz, 2021).

Universities may form **consortia** to share services ranging from infrastructure to staff development (as per this example in Portugal). Universities already set up and pay for national bodies to provide shared infrastructure, as in the case of SA's Tertiary Education and Research Network.

Full degrees on private online platforms

In countries outside South Africa, fully accredited degrees are available on private online platforms (known as MOOC platforms, even though they are no longer massive nor do they only offer open courses!). Compared to traditional degrees such degrees are described as: likely to be less expensive; more flexible; probably stackable; with many courses free to audit with an application process which can be more relaxed (Shah, 2018). In 2022, there were more than 70 legitimate online degrees listed on the aggregator Class Central (Ledwon & Ma, 2022). Such degrees would go through the usual quality – assurance processes of their awarding institutions. Although these degrees are less expensive than their face-to-face equivalents at their provider universities, they are still expensive in South African terms.

Semi-formal provision

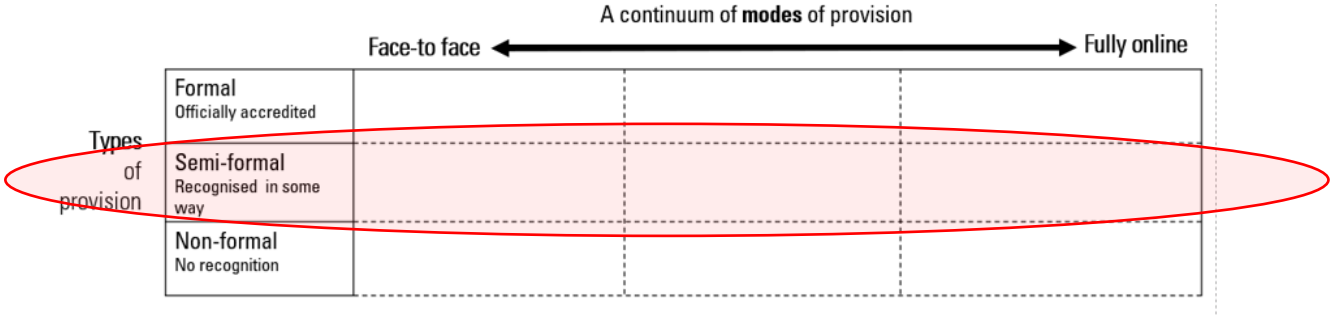

Figure 5: Informal provision

Semi-formal provision is receiving a great deal of attention including from international bodies such as UNESCO, the ILO and the OECD. The issues being raised everywhere pertain to quality assurance, recognition and regulation.

Semi-formal provision is settling into a focus on professional learning to individuals, companies and governments. The pandemic saw the growth of online courses by business and governments around the world potentially creating competition with public providers who had historically provided offerings for them.

When semi- formal provision through MOOCs began a decade ago, courses were primarily created by universities, who share/d profits made. Now an increasing number of MOOCs is being created by companies themselves together with the platform providers. It is of interest that the majority of the new courses launched on Coursera in 2021 are not developed by universities and that businesses are their major growth area .

Open online courses

Open online courses are described as open because they are open at the point of entry, i.e. open to access; there are no entry requirements.

Open courses have always existed in the traditional face-to-face sphere in the form of short courses, whether digital or not. These are certified by the awarding institution, in that the institution which offers the course provides a certificate, sometimes simply of attendance. Recognition by educational institutions is called credentialization, and commonly exists in digital form. Some South African universities have separate structures for the provision of short courses and use them as revenue-generating opportunities.

Such short courses are not as a rule, recognised as credit bearing or providing access to formal qualifications. Some universities in South Africa apparently do allow Senate Accredited Short Learning Programmes (SLPs) where a module is offered as a SLP, to accumulate to a 'partial portion' of a qualification.

Open courses provide access at course level unlike formal qualifications which are set up to provide access to entire programmes and qualifications. Although it is in fact possible for individuals to take stand-alone formal courses, this is rare and may require entry requirements being satisfied.

While open online courses are generally still known as MOOCs they are no longer massive in the sense of very large numbers of students; they do however have larger student numbers than traditional contact offerings. Nevertheless they have flourished with MOOCs reaching 220 million learners, excluding China, when reviewed at the end of 2021 (Shah, 2021)

Open does not automatically mean free. Such courses used to be promoted as free, but current business models promote certified and paid forms of the courses. Many of these courses are still free-to-audit although this is not widely marketed nor easy to find when registering for a course (Class Central does provide a list of such courses). Free-to-audit

courses do not provide certificates and limit access to assessment and nor interaction with fellow participants.

Combinations of open courses

Open courses can be combined in various ways; commonly known as being **stackable**. This is an emergent space where there is vying for stackable combinations and forms to become dominant as well as for brand names to become proprietary eponyms (the way that "to google" has become a generic term for searching online, when Google is one very rich private company, and there are other many search engines available).

Nano-degrees are combinations of vocational courses offered by Udacity, which states explicitly that these are offered with industry partners and are not accredited.

Specialisations are offered by Coursera (presently more than three hundred of these).

Micro masters are offered by EdX 2U and others and are not formally accredited qualifications as in the formal sphere.

Expert Tracks are offered by the Futurelearn platform as a set combination for specialist skills. Students receive digital certificates

Recognition of semi-formal offerings

Mechanisms for quality assuring semi-formal offerings particularly microcredentials are receiving a great deal of attention in the US, UK and Europe. This is partly for quality assurance purposes, to establish legitimacy and to ascertain whether credits can be allocated as gateways into formal programmes.

New Zealand is the only country to have included micro-credits on a qualifications framework, with the New Zealand Qualifications Framework (NZQA) issuing equivalence statements showing credit value and level for recognition onto the NZQA and micro-credentials and published in a register.

Other mechanisms for quality assurance are described in the HEQSF Review Report (CHE, 2021) in more detail and include: The New Paradigms in Recognition (PARADIGMS) Project; agencies such as the Scottish Credit and Qualification Agency and the European Credit Transfer Service (ECTS) and ACE CREDIT which arrange for peers to review non-formal learning programmes to make recommendations for credit equivalency in relation to formal post-secondary education; independent agencies being granted authority to accredit non-formal courses using transparent criteria; the use of standards against which international qualifications can be compared such as those envisaged in the Groningen Declaration Network and the UNESCO Global Convention on the Recognition of Qualifications, described above.

It is already the case that accredited courses are being made freely available. Some of these are intended to provide tasters to an accredited programme. Others are courses which are part of a qualification, which may be converted to credit amounting to around one semester of a master's degree programme, some at multiple institutions. In order to convert MOOC

coursework into university credit, the student has to be enrolled in a programme at a university (Shah et al., 2021).

Modes of provision for semi-formal offerings

Semi-formal offerings with microcredentials, badges and so on are generally assumed to be offered online. It would be unusual for these to be blended within a course, or hybrid across a set of courses.

Means of provision for semi-formal offerings

Semi-formal forms of provision are sometimes offered through individual institutions' learning management systems. Thus professional development short courses certified by the university may use the internal learning management system. This means that, for universities now, the choice of LMS has to consider supporting face-to-face students on traditional programmes, as well as semi-formal offerings in hybrid and fully online modes. Universities are turning to global platforms especially in this latter regard.

There are numerous online platforms which have been scrambling for dominant position, with a handful of dominant players having entrenched themselves at the lead during the pandemic. By the end of 2021 there were 19,400 courses offered through the MOOC ecosystem, and during that year alone providers launched over 3,100 courses and 500 microcredentials (Shah, 2021).

Significantly in 2021 two events signaled the extent to which this type of provision is in the hands of the private sector. Coursera went public, listing on the New York Stock Exchange; in brief, Coursera has a responsibility to shareholders to produce a profit which clearly determines its strategy.

For those who hoped that platform providers could serve public interests as their priority, the sale of EdX to 2U was a shock. EdX was the only significant non-profit organization in this educational ecosystem. By acquiring EdX, 2U added to its range of offerings which include short courses through the (previously) South African company GetSmarter which had been bought in 2017 for $103 million. Interesting the merged company is using the brand EdX going forward, thus leveraging EdX's reputation as a non-profit organisation although this is no longer the case.

From the perspective of the platform, these stepped offerings also reflect increased monetization.

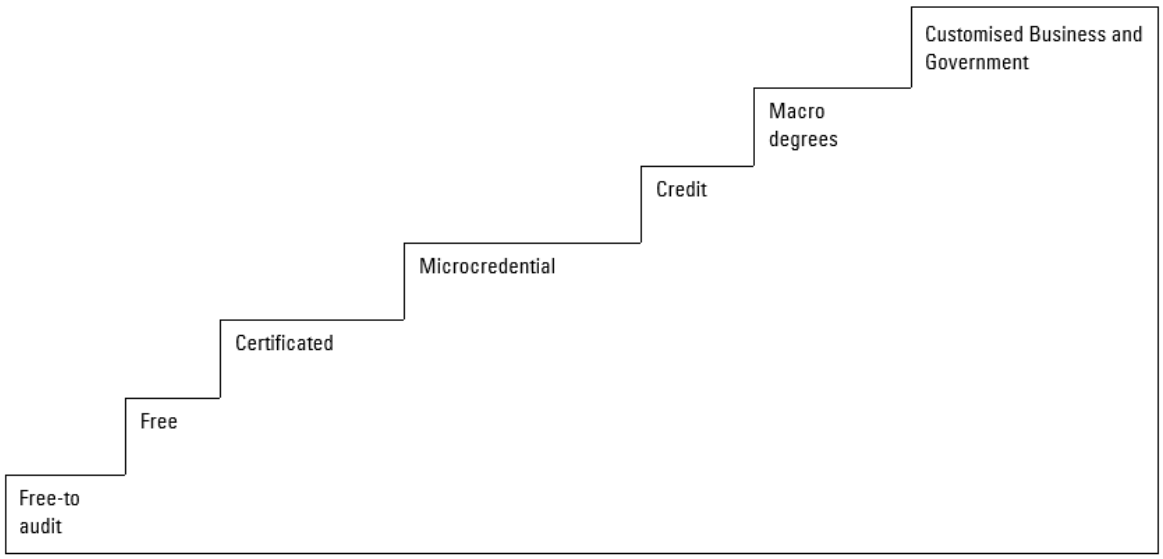

Figure 6: Types of offerings in terms of monetisation. Adapted from ClassCentral https://www.classcentral.com/report/coursera-s1-analysis/

Non-formal and informal provision

Non-formal provision exists in similar forms to other forms of provision, although they are less likely to be hybrid. For example a summer school class is a face-to-face form of non formal provision, as is a uncertified free-to audit MOOC course. Neither have any formal of credentialing attached to them. This is less likely to be the case for a blended course or a hybrid programme, both of which are more likely to be accredited or certified.

Non-formal provision can be either paid for, or free. Summer school courses are paid for, while free-to-audit online classes are not. Although MOOCs have shifted their models to encourage payment, it is still possible to ignore the prompts for payment, and freely audit MOOC courses. In 2022 there were 1,600 completely free courses on the Coursera catalogue alone.

Informal learning happens in informal community or family settings, likely more in face to face settings, although of course possible virtually.

CONCLUSION: POLICY IMPLICATIONS

To summarise, the focus of provision in HE is now on hybrid modes of provision and on new types of semi-formal types of provision which articulate with existing formal types of provision.

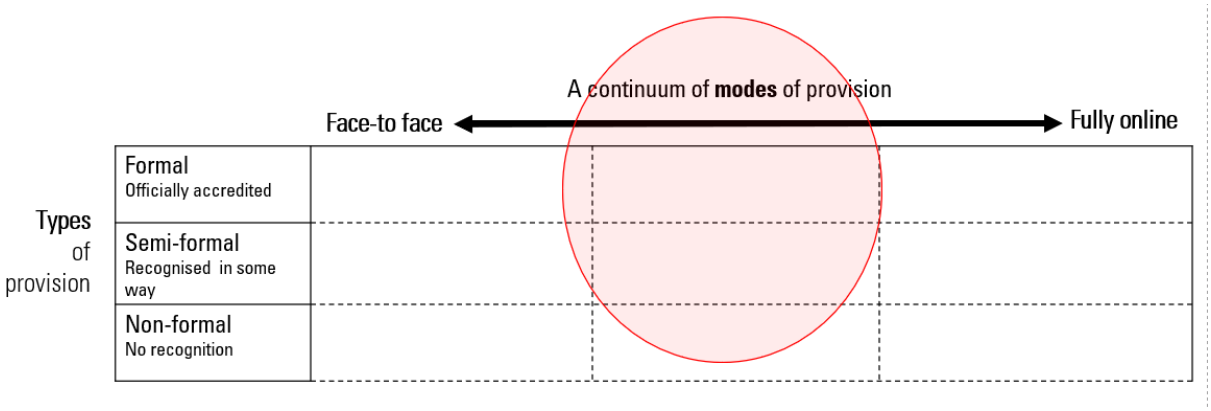

Figure 7: the focus of new forms of hybrid flexible provision

In order to enable the provision of these new types and modes of provision, DHET will need to address a number of policy and regulatory matters.

1. Review categories for modes of provision as the present categories of contact and distance are no longer fit for purpose.
2. Create mechanisms for existing qualifications frameworks to include microcredentials in their various guises.
3. Ensure that specific criteria pertaining to blended and online provision are incorporated into existing quality assurance frameworks.
4. Regulatory attention will also need to provide oversight of relationships with private companies, particularly OPMs. Regulatory considerations would include transparency of arrangements, data ownership and sovereignty; as well as the disclosure of information and privacy. DHET would need to work with other national structures to ensure that educationally specific considerations are included in relevant policies.

In conclusion, the emphasis of future provision is on flexibility. It is beyond the scope of this paper to elaborate on the discourses regarding flexibility; suffice to say that there are contestations about the purposes and ends which flexibility serves. The tensions pertain to the extent to which flexibility serves narrow instrumentalist ends, and the extent to which it genuinely affords openness and access. These issues would need elaboration when policies are developed as such policies would need to ensure that, in an unbundled and emergent provisions' sphere, public education does not serve private interests; rather that private companies should serve the needs of public HE and of all students. Similarly, policy frameworks should work against technology affordances being subsumed into growing surveillance capitalism business models but rather be leveraged for pedagogical and public interest ends.

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Acknowledgements

Grateful thanks for comments on an earlier draft to the New University of Science and Technology project team, and to Andrew Deacon and to Amanda Petra Barratt for insisting on and contributing as much clarity as possible in an opaque and changing environment.