



O1.A2 – BUSINESS MODELS FOR OPENING UP EDUCATION

Sustainability of MOOCs, OER and related online
education approaches in higher education in
Europe

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Business Models for Opening Up Education

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Foreword

This report does not aim to provide a historical review with a full set of references. That is a worthwhile exercise, but is not the purpose of this report. Nor is it supposed to be a triumphalist description of the “war between Distance Online Learning and MOOCs” along the lines of the “Battle for Open” (Weller, 2014), culminating with a view of “who won”. Nor is it an up to date inventory on “who runs MOOCs” across Europe. (That would have been a massive amount of work.)

Rather it is designed to provide guidance for senior managers in higher education institutions, mainly in four Member States of the EU – France, Italy, Spain and UK – when they come to consider whether to deploy MOOCs and related approaches, and how to justify such decisions. Just because of the relative numbers, there will be a focus on public sector institutions, but it should be noted that especially Spain but also UK and Italy have a significant number of private sector institutions.

In order to give the work the widest possible relevance to Europe, a few other European countries are looked at also and guidelines given so that readers can create their own country entries.

The report looks in detail at business models for US-based MOOC aggregators such as Udacity and Coursera as well as the European aggregators, but with the focus on lessons that can be adapted for the European scene, which differs in several ways from the US, including on accreditation issues.

The report has tried to be up to date with MOOC developments until the end of March 2016. Many interesting developments have only fully come to light in the first three months of this year.

Guiding metaphor

We have used a guiding metaphor of “roads”, suggesting that a business model is not a static entity but a journey along a choice of roads towards various possibilities, as Thomas the Rhymer is said to have seen in a famous poem bearing his name¹ which is still taught in schools in Scotland.² In the poem the Queen of Elfland³ explains to Thomas in the Scottish dialect of English of the time:

“O see not ye yon narrow road,
So thick beset wi thorns and briers?
That is the path of righteousness,
Tho after it but few enquires.

“And see not ye that braid braid⁴ road,
That lies across yon lillie leven⁵
That is the path of wickedness,
Tho some call it the road to heaven.

“And see not ye that bonnie road,
Which winds about the fernie brae?⁶
That is the road to fair Elfland,
Where you and I this night maun gae.⁷

It is a useful informal exercise to try to map the business models we discuss here into one or more of the three roads. But it goes far too far beyond our scope to speculate on which famous woman in the e-learning sector is best suited to the role of Queen of Elfland and which male Rector of a Scottish University might be most susceptible to her influence.

¹ Three key verses from “Thomas Rymer and the Queen of Elfland”, traditional ballad, composed circa 1400, Scotland – <http://www.bartleby.com/40/15.html>

² <http://www.educationscotland.gov.uk/scotlandsstories/thomastherhymer/thomasstory/index.asp>

³ = Álfheimr in Old Norse mythology, the Land of Faerie, etc

⁴ = broad

⁵ = lee, ground which has been left fallow for some time and is covered mainly by natural grass

⁶ = hillside

⁷ = must go

1. Executive Summary

For more details see Chapter 8, *Conclusions*.

The context in which business models must operate

Below are our conclusions based on specific work for this report but drawing on years of study for EU and agencies on OER, MOOCs and online learning.

OER

1. Most Member States have some activity in OER in HE.
2. Few Member States have an ongoing policy to foster and fund OER in HE.
3. At European level, OER seems to be getting less attention than Open Access and MOOCs.
4. OER material forms on the whole a very small fraction of the amount of content a typical student is required to consume – even in open universities.

MOOCs

5. Many Member States still have little activity in MOOCs, but three have substantial activity.
6. Few Member States have policies/funding to foster MOOCs. Yet MOOC activity is often greater than can be justified by the university mission and viability of MOOC business models.
7. At European level, it is hard to discern the priority that MOOCs have in specific policy terms. There is some EU funding for MOOC implementation, but less than 10 well-known projects.
8. The total number of learning hours delivered by MOOCs in a country is a tiny fraction of overall learning hours and usually a small fraction of the learning hours delivered by DOL.

DOL (Distance Online Learning)

9. Only a minority of Member States have substantial broadly-based activity in DOL – these include UK, France, Spain and Sweden. A few others have an effective open university or other specialised DOL provider or small group of DOL-active campus HEIs.
10. Apart from France, no Member State has a clear policy to foster DOL. Indeed in some Member States, HE policy is a clear inhibitor to DOL.
11. At European level, there have been several reports on open, distance and lifelong learning but little sign of the reports influencing Member State or institutional behaviours.
12. Even in countries where DOL is active the total number of learning hours delivered by DOL in a country is a small fraction of that from face-to-face.

Fees

13. The structure of fees, grants and loans is very different between Member States and sometimes (as in UK) within Member States. Fees also vary between Bachelor and Master courses, EU and international students, full-time and distance students, and public versus private institutions. This means that business models need to be grounded in a Member State context, and linked to the type of institution, provision and student being considered.

Other issues

14. Several of our conclusions are tentative. There is an ongoing lack of systematic, funded, and organised research covering the scale of OER, MOOC and DOL activity in Europe.
15. Systems to deliver MOOCs are increasingly similar to those used to deliver VLEs, so much so that the same analytic tools can be used to compare them.
16. Despite promising research and much hyperbole, there are no established techniques to substantially reduce teaching costs via use of ICT for typical university students.

Business models

DOL

1. In a few Member States, there is a viable business model for DOL.
2. The model can be made to work even better when the State allows student loans.
3. Some restrictions on student numbers in theory are not so onerous in reality.
4. There are few developments to flex the business model, beyond monthly payment schemes.
5. Venture capitalists are most interested in this model but it is not as easy in Europe as the US.
6. In a number of countries where higher education is free (for full-time students) it is possible to charge fees to part-time distance learning students, but fees are too low to allow viability.

MOOCs

7. The two main MOOC business models are *freemium*, where everything that really makes the course valuable to learners is paid for by them; and *loss-leader*, where the institution recovers its costs through increased income on other activities fostered by the MOOCs.
8. Over the years since MOOCs started, the freemium model has been under great pressure.
9. The loss-leader model is most fully developed within the UK.
10. There is a niche loss-leader route, *impact*, in the UK at least.
11. There is a third business model – *civic role* – of interest to these institutions expected to have a social mission to the community or the world, and well-funded.
12. A fourth model – *hovering* – suggests focus on MOOCs while awaiting the return of better market conditions or increased government support of DOL.
13. *Research* into online learning may be another business model in a few institutions.
14. *Zero courses* (courses with zero ECTS points, e.g. for teaching generic skills) may be justified.
15. MOOC aggregators have an additional model, *third party* – selling student data.
16. The business models for MOOCs become considerably more feasible if institutions extend “HE” to include elements of vocational and professional training.
17. The business models for MOOCs become more feasible if a provider offers a certificate which has an ECTS transfer value but which is not itself for an accredited institution/course.

OER

18. In Europe, there is as yet no viable business model for OER in HE.

Methodological conclusions

European institutions interested in substantial innovation in this area and wishing to learn from the US should:

1. Take great care in drawing *overall* conclusions for European practice from experience in the US; and take especial care with experience from California and in particular Silicon Valley.
2. Focus on *current* developments in the US, not on the long and winding road to the current approach to MOOCs.
3. Accept that there are US practices worthy of attention in Europe: close integration of the vocational education sector (ISCED 4) with the HE sector (ISCED 5-8); the importance given to vocational skills (such as programming); and systematised easy credit transfer.
4. Bear in mind the greater financial resources and strategic flexibility of many US institutions.
5. Check funding sources for any development before making assumptions on sustainability.
6. Accept that business models work better in the US because fees are higher and there are no admission quotas on student numbers.
7. Understand that population and immigration dynamics are completely different from Europe and there are massive skill shortages especially in some US states.
8. Accept that employment laws are very different and employment is much less secure.
9. Remember that overheating of some US sectors (such as IT) are different drivers from EU.
10. Realise that US institutions are not interested in fee-charging online provision beyond US except to specialised communities. Europe still has a window of opportunity.

2. Introduction, scope and definitions

This report does not aim to provide a historical review with a full set of references. That is a worthwhile exercise, but is not the purpose of this report. Nor is it supposed to be a triumphalist description of the “war between DOL⁸ and MOOCs” along the lines of the “Battle for Open” (Weller, 2014), culminating with a view of “who won”. Nor is it an up to date inventory on “who runs MOOCs” across Europe.

It is designed to provide guidance for senior managers in higher education institutions, specifically in four Member States of the EU – France, Italy, Spain and UK – when they come to consider whether to deploy MOOCs and related approaches and how to justify such decisions. Just because of the relative numbers, there will be a focus on public sector institutions, but it should be noted that especially Spain but also UK and Italy have a significant number of private sector institutions.

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The report has eight Chapters followed by References.

Chapter 1 is the Executive Summary and Chapter 2 is this one.

Chapter 3 describes theoretical Europe-wide business models for modes of online learning.

Chapter 4 looks at the general European context and Chapter 5 at the four key countries, one of which (the UK as usual) has two quite different fee regimes, in England and Scotland. Chapter 6 extends this analysis to the rest of Europe with brief entries first on Belgium (Francophone Community), Ireland and Hungary.

Chapter 7 looks beyond Europe. For reasons of space and relevance it looks mainly at the US but also at Canada. (We know there are interesting developments also in Australia and other countries.)

In Chapter 8 we draw some conclusions.

Some definitional issues with MOOCs and the systems that deliver them are analysed in an Annex, mainly of interest to technically- or pedagogically-aware readers.

Production issues

In order to make the report comprehensible to a wide European audience, some minor deviations from standard UK scholarly practice have been introduced.

1. Scholarly apparatus abbreviations are usually spelt in full – such as “page 8” not “p. 8”; and phrases like “ibid.” are not used.
2. Larger numbers have no embedded commas, thus “6500” not “6,500”
3. All amounts in currencies other than euros have equivalent amounts in euros inserted after, thus: £100 [€110]. Given the instability of sterling-euro exchange rates in the light of current events, a conservative conversion factor of £1=€1.1 has been used.
4. A certain amount of invisible mending of quotations into English English has been undertaken, but all quotations from US English are left in US English spellings (but punctuation such as “—” is changed).
5. Web sites and articles referenced only once or twice for evidential reasons are handled by footnotes; only articles of vital interest or referenced repeatedly get into the Key References.

⁸ DOL = Distance Online Learning (accredited)

2.1 Higher Education

The higher education sector across Europe is very diverse. By *Higher Education* we mean provision of programmes in ISCED levels 5 through 8, thus including short-cycle courses (ISCED 5) as well as undergraduate (Bachelors), postgraduate (Masters) and doctoral (PhD) qualifications (ISCED 6, 7 and 8 respectively).⁹ ISCED stands for “International Standard Classification of Education”. It is a vital reference source for our analyses: and the definitive text is published by UNESCO (2012).

There are many institutions other than those called *universities* delivering higher education. They are variously called polytechnics, universities of applied sciences, university colleges, fachhochschule, hogskolan, etc. They are often not permitted to offer Masters and Doctoral qualifications. They usually do not do much research.

In most Member States there are private institutions offering higher education.¹⁰ They are often private foundations (non-profit, charity, church-oriented etc.) but may be for-profit (commercial). They may be large and prestigious (as for example in US and Brazil) but are usually small and less prestigious (so far). Only a few Member States (e.g. Denmark) or regions within Member States (e.g. Wales) have no private HE institutions.

Usually private universities cannot receive funds directly from government for teaching, but in some countries (as in England – and in the US) students studying at them can draw down student loans.

A common error in EU analyses is to equate the interests of “universities” with those of state-funded public institutions with a research mission as well as a teaching mission.

Non-higher but post-secondary education

The area of ISCED 4 provision is notoriously hard to describe. It does not even have an agreed name: the phrase “further education” is used mostly only in the UK, and “VET” suggests that only vocational courses can be at ISCED 4. Furthermore the boundary between ISCED 4 and 5 is different in different countries, even within Europe and more so across the world. Finally in several countries or regions (e.g. US, Scotland) most ISCED 4 providers also offer Higher Education. In some countries some higher education providers (e.g. University of Derby within the UK) offer ISCED 4 courses also. The matter is made more complicated by the fact that some providers offer both ISCED 3 (school) and ISCED 4 courses, as in much of the UK.

At the European level there are interface issues between the ECTS system for HE and the ECVET system for VET¹¹ – and ECVET is at a much earlier stage of development than ECTS.

On the whole this area is in a disorganised and under-funded state, at least in terms of public sector provision. However, there are many active private sector providers, especially focussed on IT and management training. There are several online providers in European countries.

For more on MOOCs and OER in non-higher adult education see the ADOERUP report (Bacsich, 2015).

2.2 Open Education

The phrase *Open Education* has no precise meaning and attempts to give it one tend to restrict it to use of Open Educational Resources, which is felt to be too restrictive – and in particular excludes MOOCs.

A more useful phrase, dating from 2013 position papers from the European Commission, is *Opening Up Education*.¹² This has a focus on Open Educational Resources, but that is not its only focus: the “process” aspect of the phrase is beneficial.

⁹ <http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf>

¹⁰ https://en.wikipedia.org/wiki/Private_university#Europe

¹¹ ECTS = European Credit Transfer and Accumulation System; ECVET = European credit system for vocational education and training

We tend to think of Opening Up Education as a continuum, or a road with stops along the way, which offerings may move along (or back), somewhat as follows:

1. Open Resources for Learning
2. Open Courses (i.e. anyone can access)
3. Free online courses (i.e. anyone can register) – large (MOOCs) or small (SPOCs)
4. Low-cost online courses (e.g. at OER universities, where there is a fee to get credits even though the resources are free)
5. Online courses whose costs or fees are similar to those presented on campus.

Many commentators would add more levels, including above, below and between these five levels. We shall concentrate on levels 3, 4 and 5.

2.3 MOOCs – Massive Open Online Courses – a short history

To keep this history short it is minimally referenced. Readers should consult relevant web sites and the Wikipedia entries for the various entities listed which are not footnoted.

It is generally accepted that the first free open online course called a MOOC dates from 2008.¹³ It was developed by Stephen Downes and George Siemens who gave it the title “Connectivism and Connective Knowledge”. (Not for the first time in e-learning, the course had a somewhat self-referential title.) This is not the place to discuss whether the pedagogy of “connectivism” that the creators developed was truly new or “merely” a development of the earlier (and by 2008 largely forgotten) movement of “constructivism” – the Annex goes into more detail. However new or not it was, the MOOC movement soon gained considerable influence among pedagogues interested in online learning.

A massive impetus to the movement came from the creation by Sebastian Thrun and Peter Norvig at Stanford University of the MOOC “Introduction to Artificial Intelligence”. This was the first truly Massive course with over 160,000 students, in over 190 countries (though of course with massive bias towards US, UK etc).¹⁴

At that point the venture capital industry got interested. Although they were already investing in online learning¹⁵ in the US and indeed there were several long-existing providers of online higher education in the US,¹⁶ there was “something about MOOCs” that caught the attention of many academics and commentators not previously interested in or even aware of online learning. Most likely it was the large numbers, but there was also a climate of “disruptive innovation” at the time¹⁷ which was impatient with old innovations even if online – including the by then well-established mode of accredited online distance learning. For a modern take on this for the university sector the book *College Disrupted* by Ryan Craig (2015) is informative and enlivened by many anecdotes.

Thus Thrun set up **Udacity** in 2012 and at much the same time his fellow Stanford professors Andrew Ng and Daphne Koller set up **Coursera** – both with venture capital funding.

Europe was watching: in late 2012 the UK Open University announced **FutureLearn** and in Germany, **iversity** (which already existed) reinvented itself as a MOOC platform.

By the end of 2013 the first EU-funded projects studying MOOCs were under way, such as **eMundus**,¹⁸ and some other projects like POERUP had pivoted their missions to include MOOCs

¹² <http://openeducationeuropa.eu/en/initiative>

¹³ <http://moocnewsandreviews.com/a-short-history-of-moocs-and-distance-learning/>

¹⁴ <http://www.thegoodmooc.com/2013/05/a-review-of-stanford-ai-class.html>

¹⁵ Bridgepoint Education bought Ashford University (which had online courses) in 2005; University Ventures was set up in 2011

¹⁶ such as Apollo, Capella, DeVry etc

¹⁷ associated with the work of Clayton Christensen – <http://www.claytonchristensen.com/key-concepts/>

¹⁸ <http://www.menon.org/projects/emundus/>

within their scope as MOOCs took over much of the former interest in OER. Soon after, a series of EU-funded MOOC implementation projects started, such as **EMMA**.¹⁹

The analytic projects eMundus and POERUP started cataloguing the institutions developing MOOCs²⁰ and the Open Education Europa portal set up its MOOC aggregator to document all MOOCs offered by European institutions as well as the institutions themselves.²¹ We shall in particular use the Open Education Europa portal in our country analyses. There are also a set of less official MOOC lists.²²

For a useful overview of MOOCs circa end 2014, with six anonymised case studies, readers are advised to consult the book *To MOOC or Not to MOOC* by Sarah Porter (2015).

The current situation with MOOCs raises three important questions.

1 – Are MOOCs an “important” development?

Yes, strategically – but not in percentage terms of the total amount of education delivered. A calculation in ADOERUP (Bacsich, 2015) worked out that:

The MOOC provider **iversity**, along with FutureLearn a leading MOOC provider in Europe, lists on its web site (iversity, 2015) 53 MOOCs. These MOOCs vary in study time, but most require no more than 40 hours of study time, which we shall conservatively estimate as 2 credits in the ECTS scheme. In contrast the University of Leicester (2015) lists 58 online courses on its distance learning web page either at full Masters level (90 credits) or at Postgraduate Diploma (60 credits). Ignoring the dissertation element (30 credits) of the full masters implies that each of these 58 online courses has 60 credits of taught material, in other words 30 times the study time of one iversity MOOC. Turning it around, **all the MOOCs in iversity** amount to no more than **two** Masters courses at **one university** (the University of Leicester). Given that at least 20 UK universities are large providers of online Masters, the total study time offering of MOOCs is still a very small percentage of total online learning. It will take longer before OER and MOOCs are seen as more than just a ‘blip’.

2 – Are MOOCs “courses”?

In theory, every educational offering from any educational institution, public or private, has to conform to the ISCED hierarchy.

Thus if a MOOC is a university-level course it should be classified somewhere between ISCED 5 and ISCED 8. All such courses are subject to quality control from a relevant national agency for quality in HE and are usually also regulated by the relevant ministry in terms of fees, student numbers, etc – *even if there is no fee*. (In some countries there is no fee for university courses.)

Very few MOOC providers claim that their course is appropriate for school-level learning – thus the courses cannot be at ISCED levels 1, 2, or 3 – and level 0 is for pre-school only.

Thus most MOOC courses must be at level 4 – a level used for “post-secondary non-tertiary education”. In more detail this is defined by ISCED as:²³

Post-secondary non-tertiary education provides learning experiences building on secondary education, preparing for labour market entry as well as tertiary education. **It aims at the individual acquisition of knowledge, skills and competencies lower than the level of complexity characteristic of tertiary education.** Programmes at ISCED level 4, or post-secondary non-tertiary education, are typically designed to provide individuals who

¹⁹ <http://www.openeducationeuropa.eu/en/project/emma-0>

²⁰ for a snapshot see <http://poerup.referata.com/wiki/MOOC>

²¹ <http://www.openeducationeuropa.eu/en/find/courses>

²² such as <https://www.mooc-list.com>

²³ <http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf> paragraph 185 (page 43)

completed ISCED level 3 with nontertiary qualifications required for progression to tertiary education or for employment when their ISCED level 3 qualification does not grant such access. For example, graduates from general ISCED level 3 programmes may choose to complete a non-tertiary vocational qualification; or graduates from vocational ISCED level 3 programmes may choose to increase their level of qualifications or specialise further. **The content of ISCED level 4 programmes is not sufficiently complex to be regarded as tertiary education, although it is clearly post-secondary.**

This seems to us, especially the parts in bold, to describe many MOOC offerings quite well.

However, there is a major snag. In most countries level 4 qualifications are also regulated, and often in a way more focussed on learning outcomes and with less adaptation to the special issues raised by online learning. Thus even if a university is permitted by its government or its charter to offer such programmes, it does not seem to absolve it from regulation. Moreover, as soon as a university develops a system of badges to provide an accreditation route, it makes the offering much more like an accredited course and so even more susceptible to regulation. (We return to this in Chapter 7.)

Thus it is not clear what exemption from regulation the universities are relying on. To us this implies that as the MOOC programmes scale up, governments and regulators will get interested, especially if there is a delivery failure, complaints from students, evidence that universities are using government funds for reasons outside their charter, or a complaint from the private sector, such as publishers, that universities are using government funds to take away business from them. (There have already been legal cases in Europe on this aspect, involving at least one open university.)

Concerns about future regulation of MOOCs by quality agencies may be one of the justifications why there is interest from MOOC providers in adapting existing higher education quality processes for MOOCs,²⁴ just as was done a few years ago for OER.²⁵

However, it is interesting that higher education quality agencies across Europe, even the few that do or did pay attention to quality of online learning,²⁶ do not focus on the quality of online *content*, regarding that as one of many factors that contribute to the overall quality of a course and best judged within specific institutional contexts.²⁷

3 – Can MOOCs be delivered by a VLE just like online courses?

In a nutshell, yes. The Annex to this Report discusses the issue in detail. In the last few years the functionality of MOOCs has developed considerably, so much so that the leading ones (such as edX) compare quite well with the leading VLEs such as Blackboard, Canvas and Moodle.

In reverse, both Blackboard and Canvas also have modes whereby they can deliver MOOCs – and in particular the Canvas Network is very active.²⁸ The Network's 2015 Progress Report recorded that:²⁹

- We gained 54 new partners in 2014, increasing our total number of partners to 117...
- We offered 164 courses in 2014, which is 130 percent more than the number offered in 2013.
- Enrollments for 2014 totaled 214997, which is 113 percent more than 2013.

²⁴ see in particular the Erasmus+ project *MOOQ: Massive Online Open Education Quality* – <https://www.ou.nl/web/welten-research/mooq>

²⁵ in particular *OPAL* – <http://www.open.ac.uk/iet/main/research-innovation/research-projects/open-educational-quality-initiative-opal>

²⁶ such as QAA in the UK –

²⁷ see the summary report <http://www.qaa.ac.uk/en/Publications/Documents/Outcomes-institutional-audit-Second-series-Institutions-support-e-learning.pdf> – dated 2008

²⁸ <https://www.canvas.net>

²⁹ https://www.canvaslms.com/downloads/CN_Progress_report_2015.pdf

2.4 Distance online learning

In contrast with MOOCs, distance learning is much less fashionable, despite (or because of) its much longer history.

There were some earlier examples but the first university-level distance learning programme was probably the University of London External Programme, founded in 1858.³⁰ Other advanced countries such as Australia and the US developed university-level programmes in the 1900s but perhaps the next conceptual shift was the development of the “Open Universities” from the 1960s onward, starting with the UK Open University in 1969, followed soon after by Athabasca University in Canada, and then spreading across Europe to Netherlands (OUNL), Spain (UNED and UOC) and Germany (FernU) – and more recently to Greece and Cyprus.

By the late 1990s distance education was found in many US and UK universities and because of this the first moves to regulate its quality had begun, with the influential *Quality on the Line* report in the US³¹ and similar moves in the UK. Moreover, though originally based on printed material and correspondence tuition (using post), distance learning had developed a substantial online tinge in many institutions and the online element grew steadily in the next two decades. Thus by 2010, in most institutions distance education is predominantly online, both for interaction and for content, though textbooks are still often found, and welcomed by some students.

One issue in Europe is that, just as with OER and MOOCs, the amount of distance learning varies substantially between European countries. We shall return to this issue in our country sections.

2.5 Business models

One would expect that the *Financial Times* would give a good definition of “business model” – and it does (our emphasis in bold):³²

This describes the method or means by which a company tries to capture value from its business. A business model may be based on many different aspects of a company, such as how it makes, distributes, prices or advertises its products.

The business model concentrates on value creation. It describes a company’s or organisation’s core strategy to generate economic value, **normally in the form of revenue.**

The model provides the basic template for a business to compete in the market place, it provides a template on how the firm is going to make money, and how the firm will work with internal players (firm’s employees and managers) and external players (stakeholders such as customers, suppliers, and investors).

The business model indicates how the firm will convert inputs (capital, raw materials and labour) into outputs (total value of goods produced) and make a return that is greater than the opportunity cost of capital and delivers a return to its investors. This means that a business model’s success is reflected in its ability to create returns that are greater than the (opportunity) cost of capital, invested by its shareholders and bondholders.

Business models are an essential part of strategy – they provide the fundamental link between product markets, within the industry, and the markets for the factors of production such as labour and capital.

Any resilient business model must be able to create and sustain returns for its investors over time, otherwise, it is likely to go out of business or fashion.

The article goes on to describe three business models, two good, one bad, all of which are relevant to MOOCs and universities. See the table on the next page.

³⁰ <http://www.londoninternational.ac.uk/our-global-reputation/our-history>

³¹ <http://www.ihep.org/sites/default/files/uploads/docs/pubs/qualityontheline.pdf>

³² <http://lexicon.ft.com/Term?term=business-model>

Business models for opening up education

<i>Financial Times example</i>	<i>MOOC/university example</i>
The 'razors and blades' model used by companies such as Gillette, in which a basic product (the razor) is sold cheaply, but an essential add-on or consumable (the blade) is sold at a high price once the customer has been lured in.	<ul style="list-style-type: none"> • University login is free and content is cheap (or even free) • Accreditation of each module is expensive
Another example is a mobile phone company may sell handsets (the bait) at a reduced price while signing up customers to buy calls over the period of a contract (the hook).	<ul style="list-style-type: none"> • Free laptop for each student • But have to sign up and pay for a 3-year degree
Also General Motors, for many years, had an unsustainable business model as its returns did not match or exceed its cost of capital. Profitability was focused on the financing of cars, i.e. providing financing to its automotive customers, such as loans to buy the cars, through its finance subsidiary GMAC, rather than by designing and manufacturing sought after cars that are also cost competitive.	<ul style="list-style-type: none"> • Is this what is happening to the US Higher Education system? • Fees are high and getting higher • Cost of student loans to cover these fees is unsustainable for students and government

3. Business models for online learning

3.1 History of business models for online learning

Although it is little known now, the work on business models for online learning goes back to at least the late 1990s, when the *Business of Borderless Education* report was released³³ and the first “e-universities” were being developed in English-speaking countries (most of them ignoring that the Open University of Catalonia was already active).

In many working papers (mostly confidential to government or lost in the mists of time)³⁴ the topics of massification, step-change, unbundling, quality etc were rehearsed. Few of the topics discussed today are new – except for free and open courses.

3.2 Current situation

In many ways progress in online learning since 2000 has been slow in Europe, until recently:

1. Most of the e-universities failed, both single providers and consortia, casting a shadow over many related developments: see the companion D-TRANSFORM³⁵ policies report (Rivera-Velez and Thibault, 2016) for more on this.
2. The era of building new open universities in Europe came to an almost complete halt, with very occasional exceptions such as the Open University of Cyprus.³⁶
3. Most research-led institutions did not get involved with distance learning, leaving it to the “polytechnic” entities within the higher education sector in each country.
4. Most open universities made very slow progress towards becoming full e-universities (delivering 100% pure distance e-learning, with no hard-copy material), and it appears that this change process is still not quite complete – with some institutions deciding, for good reasons, that it should not be completed just yet, given their demographics (older and poorer students in less advanced countries).
5. US distance teaching universities, even the largest, showed little interest in seeking to find and support European students – despite fears of this for 20 years, “Le Défi Américain” as envisaged by Jean-Jacques Servan-Schreiber never happened in online learning.³⁷
6. The much-feared rush of capital into private online providers, either replacing or partnering with conventional universities, did not happen – not in Europe, not even in the UK, not to any great extent.
7. However, there are a small number of small innovative online providers of higher education³⁸ and some venture capital investments in European private universities that operate wholly or partly online.³⁹

It was not until the MOOC explosion, first in Canada and US, later in Europe and rest of the world, that things began to change. This has also affected paid-for accredited online courses.

³³ summary report archived at <http://dera.ioe.ac.uk/15163/1/The%20business%20of%20borderless%20education%20-%20summary.pdf>

³⁴ see for example the 15-year-old report *Responses to consultation on the proposed e-University business model*, HEFCE, 2000, http://webarchive.nationalarchives.gov.uk/20100202100434/http://www.hefce.ac.uk/pubs/hefce/2000/00_43.htm

³⁵ <http://www.dtransform.eu>

³⁶ <http://www.ouc.ac.cy/web/guest/home>

³⁷ <http://www.telegraph.co.uk/news/obituaries/1533605/Jean-Jacques-Servan-Schreiber.html>

³⁸ examples include:

1. Campus NOOA in Norway, the Nordic Open Online Academy – <http://campus.nooa.info/?lang=en>
2. Open College of the Arts, England – <http://www.oca.ac.uk>
3. Interactive Design Institute, Scotland – <http://idesigni.co.uk>

³⁹ such as:

1. University of Law, UK – <http://www.globaluniversitysystems.com/our-institutions>
2. University of Nicosia, Cyprus – http://universityventures.com/current_investments.php

In particular in a few EU countries, most notably UK and Spain, there has been rapid growth – even if in many other countries including Germany and Denmark, things are much more static.

3.3 The Paradigmatic Business Model: for paid-for online courses

The analysis from now on does not depend on specific research papers on MOOCs. It is based on general considerations evident to developers of online learning courses over many years, with analyses funded by the European Union and JISC over the last 20 years, associated with the names of Curran, Rumble, Laurillard and Bacsich.

Laurillard (2011) brings together several of the threads. JISC recently provided a useful summary of cost modelling approaches⁴⁰ based on work last updated in Bacsich (2008). Other references are in the Additional Reading in Chapter 9.

For paid-for online courses there is an paradigmatic business model – which is clearest at postgraduate level for international (i.e. non-EU) students in the many EU countries where “commercial” fees can be levied on international students (UK, Ireland, Netherlands, Denmark, Sweden etc).⁴¹

In reality there are few practical limits on the fees that can be charged and in theory there are virtually no limits on the number of students that can be enrolled, since the costs of teaching each extra student is more than covered out of the fee. For an online course the set-up costs can be quite low, relative to campus-based courses, and so a large-enrolment course can be very cost-effective.

This is the exact same model which drove the growth of the early open universities, though in those days many of them were very adept at extracting the fees from government rather than from the students.

For postgraduate students from *within the EU* there are greater limitations on fee levels, but still in UK and several other countries the fees can be high. In England, the student loan scheme for undergraduate students is now being extended to a postgraduate and doctoral loan scheme, which unusually will apply all across the UK and is available to part-time (including distance learning) students.⁴²

For undergraduate EU students the business model is usually more challenging: there may only be a low fee that can be charged, which will not cover the costs, or even a zero fee – and there is usually a government quota on the number of students that can be enrolled, rather than the government giving the university extra funds for every single extra student enrolled.

Worse, there are some countries where concerns about inflow of students from neighbouring countries have given rise to restrictions on the percentage of “foreign” students that can be enrolled. Although such restrictions are in theory contrary to EU law, in practice various “temporary” restrictions have been imposed, at least for certain subjects (typically medicine): such as in Francophone Belgium in respect of French students, and Austria in terms of German students.⁴³

When courses cannot charge fees, an already complicated situation becomes even less viable. Either institutions have to charge fees for services associated with the course, or find another justification for the costs of putting on the course.

Reflecting on this and adding a few other points leads to the following summary:

⁴⁰ <https://www.jisc.ac.uk/guides/costing-technologies-and-services/experiences-of-cost-modelling>

⁴¹ for more details see <http://www.mastersportal.eu/articles/405/tuition-fees-at-universities-in-europe-overview-and-comparison.html>

⁴² <https://www.prospects.ac.uk/postgraduate-study/funding-postgraduate-study/postgraduate-loans>

⁴³ http://europa.eu/rapid/press-release_IP-12-1388_en.htm

Business Models for DOL (Distance Online Learning)

1. In a few Member States there is a viable business model for DOL on a large scale. WHEN fees can be close to⁴⁴ the economic level AND there are no restrictions on student numbers, then each new student is worth having.
2. The business model can be made to work even better when the State allows students to draw down a loan for study (UK/England and US, both also for approved private providers).
3. If there are restrictions on student numbers in theory, it may turn out in practice that due to local factors an HEI may be under its quota (perhaps because it was set in more prosperous times); or that the HEI can lobby its government to have its quota increased; or that in reality there is no quota for part-time or DOL students because the government wants (discreetly) to encourage them.⁴⁵
4. Interestingly (unlike for MOOCs), there are very few developments to flex the business model, beyond various monthly payment schemes.
5. Despite appearances,⁴⁶ venture capitalists are most interested in this model, either setting up new private providers, or partnering with existing public providers. This does not mean that it is easy to make money from such arrangements, especially in Europe – though a few providers such as Laureate or RDI (part of Capella)⁴⁷ have done useful amounts of business in Europe.
6. In a number of countries where higher education is free (for full-time students) it is still possible to charge fees (usually low fees) to part-time distance learning students (Ireland, France etc). However the fees are not usually high enough to provide a viable business model – unless simplifications are made in the mode of provision – which could lead down the road of using MOOCs.

3.4 The Paradigmatic Business Model: adapting it for free online courses

For simplicity we shall regard free online courses as the same as MOOCs, at this stage. The content in them may be openly licensed (open MOOCs) or it may not (closed MOOCs). We shall also regard MOOCs as including SPOCs, so that the course may not be open enrolment but restricted to students at a particular university or employees at a particular company (undergoing professional development).

Although it is later in this report (Chapter 4) that we get into details, it is an undeniable fact that only a minority of countries in Europe have substantial activity in MOOCs and even in those countries it is only a minority of universities who are active in MOOCs. Thus business models for MOOCs considered *so far* in Europe are either not compelling or not well known. The second is less likely because universities are well networked in most countries and the European Commission has put a lot of energy into funding MOOC consortia and commissioning/disseminating optimistic reports. In our view this makes our report very timely – perhaps greater clarity on *relevant* business models is needed.

Essentially, since a MOOC is free (thus earns no income) then the development and support costs of running it must be absorbed by the university. This might be for several reasons:

1. A number of universities have or would wish to have a *civic role* mission and so running MOOCs can replace other techniques already delivering such missions, such as evening classes or cultural events. This might even apply internationally.
2. MOOCs are an active area of *research* – and one has to accept that fashion plays a role in research funders' and staff's priorities. (Research in online distance learning has never been a popular research topic outside the open universities.)

⁴⁴ or even above

⁴⁵ this was more common in pre-recession times

⁴⁶ Coursera and Udacity in particular

⁴⁷ now for sale by Capella

3. The University might wish to develop paid-for online courses and regards MOOCs as an easy way into that, avoiding issues of quality control, selling and possible regulatory issues – thus *hovering* until it decides whether to go ahead with paid-for online courses.⁴⁸
4. The University sees MOOCs as a way of enhancing its brand or publicising its research. (Publicising research is a compelling strategy in the UK because the level of government funding of UK HE research depends to some extent on its “*impact*”.)
5. There are some special situations where the University is forced to put on *zero courses*, courses for which it is not directly reimbursed (by government or students) because they have no ECTS value, being outside the formal curriculum. These include mathematics courses to bridge the increasing gap in several countries between what is taught at school and what is expected at university. (Statistics is a similar challenge in some institutions.) Related issues arise with foreign languages, at least in some countries, as student enthusiasm in schools for them declines. The other growth area is generic skills such as digital literacy and employability where it takes time and work to map them into each specific ECTS curriculum (where many feel they should reside), yet changes in digital study skills needs and employment levels may occur more rapidly than curricula can.

There is nothing wrong with such justifications but in most European universities in most countries funds for such developments are very limited – thus any such approach is likely to generate just a few MOOCs.

To get beyond that scale requires a more powerful and scalable business model. There are two main choices, not necessarily exclusive:

- Use MOOCs as a *loss leader* – that is, a marketing tool for paid-for online courses (or even paid-for residential courses).
- Add paid-for parts to the core free MOOC offering – the typical internet start-up *freemium* approach. And if that does not work, reduce the scope of the free part, as several providers have been doing recently (see Chapter 7).

It is not commonly realised that at “market rate” fee levels, the *loss leader* business model for MOOCs can be very effective. While there are many caveats,⁴⁹ a recent study⁵⁰ estimated the typical cost of a FutureLearn MOOC at around £30000 – call it €40000 to allow a small margin. A very cheap UK MSc has a fee of €10000 – and many MSc programmes are running under capacity, implying that teaching a few extra students has a marginal cost of zero, in the way UK universities do their calculations. Thus if one FutureLearn MOOC convinces 4 more students to register for the MSc, the costs are covered – and if 10 more, then the university makes a very useful surplus.

The *freemium* approach has similarities with the way that some distance learning providers started, such as the University of London External Programme. Initially (in 1858) this offered examinations only and left the students free to study as they wish – leading to the development of several colleges and later universities to satisfy the students’ teaching needs.⁵¹ Other distance providers, though not the UK OU, started their offerings with no tutoring at all, except for feedback on assignments.

An interesting conceptual – and regulatory – challenge is that if one bulks up a MOOC with paid-for additions to create a fully-taught fully-assessed fully-accreditable course, is it an accredited HE course or not? *In particular does it sit within the ECTS framework and within the purview of the national quality regulators?* (More of this in Chapter 7.)

⁴⁸ as any helicopter pilot knows, hovering is expensive – see e.g.

http://www.met.police.uk/foi/pdfs/disclosure_2014/july_2014/2014070000470.pdf

⁴⁹ UK and European universities are on the whole not very skilled in costing their teaching and e-learning services, compared e.g. with US or Australia

⁵⁰ Moocs: fluctuating rates in online investment, THE, 23 April 2015 –

<https://www.timeshighereducation.com/news/moocs-fluctuating-rates-in-online-investment/2019816.article>

⁵¹ https://en.wikipedia.org/wiki/University_of_London_International_Programmes and see the footnotes also

The role of MOOC aggregators will also be discussed later (in Chapter 7) – at this stage all we say is that they need to make money too, and not only by charging their member universities. A natural way, enshrined in internet start-up tradition, is to sell data to *third parties* such as employers.

We can summarise all this as follows.

Business Models for MOOCs

1. The two main MOOC business models are (a) *freemium*, where everything that really makes the course valuable to learners, such as exams, accreditation as an HE module, career advice etc. is paid for; and (b) *loss-leader*, where the institution recovers its costs through increased income on other activities.
2. Over the years since MOOCs started, the freemium model has been under pressure, with most recently Coursera⁵² decommitting most fully from it.
3. The loss-leader model is perhaps most fully developed within FutureLearn. In its purest UK form, this expects that students enjoying a FutureLearn MOOC will be motivated to come to the campus of the host university to study a Masters⁵³ – alternatively to stay at home and study one of over 800 fully online Masters degrees from UK HEIs.⁵⁴ In countries where Masters degrees command high fees, especially for non-EU students, even a low conversion factor generates a viable business plan.
4. There is a secondary loss-leader route. In countries with an intrusive metrics-based research assessment exercise (UK), *impact*⁵⁵ of research is a key measure: high impact contributes to high research ranking, which in turn leads to higher pay-outs from the government when the next research assessment exercise (called REF in UK) takes place.
5. There is another business model – *civic role* – of interest in these institutions expected to have a social mission to the community or the world, and lucky enough to be in a country where universities are still relatively well-funded (such as England).⁵⁶ Several UK elite institutions were originally set up with a strong focus on adult education and not all of this mission has dissipated. Thus a small amount of MOOC activity can be justified on this basis. But such a model cannot scale, unless other business models come into play. And across Europe, adult education is very badly funded.⁵⁷
6. There is some evidence of a fourth model – *hovering*. In countries (such as UK) where in theory there is a vibrant model for DOL at postgraduate level, but in reality market conditions are leading to reducing overall numbers and increased contestation,⁵⁸ teams can be refocused on MOOCs, maintaining competence levels and piloting innovative potentially cost-reducing techniques, awaiting the return of better market conditions or increased government support of DOL.
7. *Research* may be another business model in a few institutions.
8. Zero courses are useful in certain circumstances and can even be shared between institutions.
9. MOOC aggregators have another model, *third party* – selling student data to employers or advertisers, but so far such models seem rather marginal in their effect. One should not discount such models (since many social network companies started in this way) but the route to viability via this route is likely to take years.

⁵² Coursera, blog, 19 January 2016, <https://blog.coursera.org/post/137649201147>

⁵³ or even a PhD

⁵⁴ <http://www.distancelearningportal.com/search/?q=ci-30|lv-master|mh-online&order=relevance>

⁵⁵ think of this as valorisation in the EU R&D context

⁵⁶ Tuition fees give England universities surplus worth £1.8bn –

<http://www.theguardian.com/education/2016/mar/03/tuition-fees-england-universities-surplus-balance>

⁵⁷ “A series of reports over the last few years have made it clear that the EU has considerable catching up to do in order to match the level of education of other advanced economies” – ADOERUP (Bacsich, 2015) page 11

⁵⁸ <http://www.hefce.ac.uk/analysis/postgraduate/>

3.5 The Paradigmatic Business Model: adapting it for free resources

Business Models for OER

In Europe, there is not yet a viable business model for OER in HE – the North American *Open Textbook* model, which has begun to work in the US and Canada, has not got started in EU at HE level and is of limited relevance even in schools, as demonstrated by Pepler et al (2015).⁵⁹

A few large institutions claim that they can justify the activity because of the increased exposure they get and thus it is an aid to marketing paid-for courses, or building brand or reputation. However, quantitative information is scanty.

The *OER universitas* is not really a counter-example: it would more properly be classified as a MOOC consortium, since it is focussed on delivering free online courses.

Globally it is influential, but it has few members in Europe.⁶⁰ It has spent some years building towards an operation at scale without making any breakthrough in numbers.⁶¹ Interestingly Brown et al (2015, page 109) comment that “a number of questions remain about its regulatory status, ability to accredit programmes, and long-term sustainability in the face of more established MOOC initiatives”.

⁵⁹ note that there are a few school-based OER textbook initiatives such as in Poland – <https://re-publica.de/session/oer-textbooks-polish-schools-year-later>

⁶⁰ UK OU, UHI and USW in UK, IT Sligo (a small institution) in Ireland and UOC in Spain – <http://oeru.org/oeru-partners/>

⁶¹ in particular most OER universitas courses are rather short, looking typical of many MOOC offerings – <http://oeru.org/courses/>

4. Adapting the paradigms to the European context

The population of Europe (in a wide sense, including Russia, Turkey and the Caucasian states) is estimated at around 740 million.⁶² The population of the European Union is 503 million⁶³ – considerably more than the US at 320 million. Within the countries of interest to us – EU and some others (mostly Erasmus+ Programme countries) – this breaks down as follows.

Austria	8.6	Malta	0.4
Belgium	11.1	Netherlands	16.8
Bulgaria	7.1	Poland	38.2
Croatia	4.3	Portugal	10.6
Cyprus	0.8	Romania	21.6
Czech Republic	10.8	Slovakia	5.6
Denmark	5.7	Slovenia	2.1
Estonia	1.3	Spain	47.2
Finland	5.5	Sweden	9.7
France	65.0	UK	63.8
Germany	82.6	Iceland	0.3
Greece	11.1	Norway	5.1
Hungary	9.9	Switzerland	8.2
Ireland	4.7	Montenegro	0.6
Italy	61.1	Russia	142.1
Latvia	2.0	Serbia	9.4
Lithuania	3.0	Turkey	75.0
Luxembourg	0.5	Ukraine	42.5

Where appropriate we shall normalise future entity numbers on a “per million population” basis.

4.1 OER

As many analytic projects have reported, OER is not very prevalent across Europe. In June 2014, the EU-funded project POERUP (Policies for OER Uptake) reported that there were 118 OER initiatives across Europe in its curated database,⁶⁴ although it was aware of at least the same number again that had not been fully analysed. Most were in higher education: they could be found mainly in UK, Netherlands, France and Spain, with smaller clusters in Italy, Poland, Finland and Russia. Much of central and eastern Europe had very little visible OER activity.

Activity since then is spreading across more countries as documented in ADOERUP (Bacsich, 2015), but even by mid 2014 many of the projects curated, especially in the UK, had ceased activity.

Since 2014 there has been no systematic, funded, public Europe-wide programme to keep an information base of OER projects up to date. However, from time to time other projects (such as ADOERUP and OERup!) carry out or fund country-specific studies on OER. In addition the Hewlett-funded OER World Map⁶⁵ project is encouraging country champions on a volunteer basis to

⁶² https://en.wikipedia.org/wiki/Demographics_of_Europe

⁶³ http://europa.eu/about-eu/facts-figures/living/index_en.htm

⁶⁴ <http://poerup.referata.com/wiki/Europe>

⁶⁵ <https://oerworldmap.org/>

document their country's projects, such as for Germany recently.⁶⁶ As the report on Germany demonstrates, the volunteer-supported Open Education Working Group (of which the author is Coordinator) of the Open Knowledge Foundation encourages country experts to publish "open education" country studies and notable projects on its blog.⁶⁷

Nevertheless it is still the case that many countries in Europe have very low levels of institutionally- or nationally-funded OER projects in higher education. Furthermore at least two countries (UK and Netherlands) have reduced to a minimum their funding for OER developments in HE.

As a consequence of this, there is renewed interest in many EU member states in grassroots OER initiatives in universities requiring only low levels of funding (e.g. from within the institution) or via enthusiasts' efforts. There are only a few institutions, typically open universities – and the UK Open University in particular⁶⁸ – where effort continues on a substantial scale.⁶⁹

Even in the open universities there is no public information on how the activity is funded⁷⁰ – but in several (not all) there is substantial use of EU funding – not sustainable in the longer term. None of this indicates that there are viable business models lurking invisible to view.

4.2 MOOCs

As POERUP and related projects had to take into account, there was a "pivot" from OER to MOOCs in Europe around 2013 – and in contrast to OER, the number of MOOC initiatives has been growing fast. Open Education Europa reported⁷¹ 241 MOOCs starting (and finishing) in 2013, rising to 674 in 2014 and 866 in 2015 – two years in which the European MOOC consortia FutureLearn and iversity were growing fast and many EU-funded MOOC associations were active.

In addition, a recent survey of institutions (Jansen and Schuwer, 2015) conducted in late 2014 suggested that "71.7% of the institutions has a MOOC or is planning to develop one" (page 3), having risen from 58% in a similar survey a year earlier. (On the other hand the survey had only 67 respondents, about 2% of all European HEIs, with most Member States returning 3 or less replies.)

Intriguingly, in the first three months of 2016, Open Education Europa reported that only 18 MOOCs are recorded as starting soon. Even if (as is likely) some of this seems to be due to lack of reporting it would not be surprising if the pivot *from* MOOCs (in universities) evident in the US last summer⁷² was not by now working through to Europe – though part of the reason may be due to the Lifelong Learning Programme winding down and Erasmus+ not being a seamless replacement, not for MOOC activity anyway.

There is a caveat that the typical MOOC represents around 1 ECTS (if it were to be accredited) compared with 60-120 ECTS in a typical Masters – and of course many of the MOOCs are repeated every few months. Thus compared with Masters programmes this is much less material than many think.

⁶⁶ <http://education.okfn.org/mapping-oer-analysis-of-the-current-state-of-open-educational-resources-oer-in-germany/>

⁶⁷ <http://education.okfn.org/blog/>

⁶⁸ OpenLearn – <http://www.open.edu/openlearn/>

⁶⁹ The Open University Annual Report 2014/2015 notes on page 8: "Over 600,000 people were inspired by our programmes and visited OpenLearn to explore subjects in greater depth" –

<http://www.open.ac.uk/about/main/sites/www.open.ac.uk.about.main/files/files/Annual%20Report%202014%2015.pdf>

⁷⁰ and more than one open university has had to live with only a small surplus or even a deficit –

<https://www.timeshighereducation.com/news/open-universitys-numbers-dive-28-as-pool-of-part-timers-dries-up/2018593.article> – leading to "a deficit of £16.9 million in 2013/14" (page 26 of

<https://www.open.ac.uk/about/main/sites/www.open.ac.uk.about.main/files/files/ecms/web-content/about-annual-report-2013-14.pdf>)

⁷¹ <http://www.openeducationeuropa.eu/en/find/moocs?> – then enter the search parameters

⁷² for example, in conversations at the *FutureLearning 2020 Summit* at Stanford in 2015 – <http://www.futurelearninglab.org/may-2015-summit/> – picking up on articles from late 2014 such as "Will MOOCs be flukes?" – <http://www.newyorker.com/science/maria-konnikova/moocs-failure-solutions>

Business models for opening up education

The MOOC consortia are key to long-term sustainability. EU funding can help consortia to build up experience and work towards a sustainability plan, but cannot itself form a sustainability strategy. So the following table is interesting.

Note how few Member States have any consortial MOOC activity at all. The table does under-represent national consortia but with the exception of France and Netherlands this is not likely to make a difference to the numbers and no difference to country coverage. The box below explains the headings in the main table.

Legend

Country	EU Member State; EEA/Switzerland; other European (key ones only) – 36 total
Pop (m)	Population in millions to nearest 0.1 million, from 2015 statistics where feasible
#HEPs	Estimated number of all Higher Education Providers, public and private, based on a norm of 4 per million population used in previous analytic projects
C'rsera	Coursera full institutional members which are higher education institutions
F'Learn	Futurelearn full institutional members which are higher education institutions
Iversity	iversity full institutional members which are higher education institutions
OEC	Open Education Consortium full institutional members which are higher education institutions and are direct members not members via educational consortia
OER u	OER universitas full institutional members (OER u programmes are open MOOCs)

<i>Country</i>	<i>Pop (m)</i>	<i>#HEPs</i>	<i>C'rsera</i>	<i>F'Learn</i>	<i>Iversity</i>	<i>OEC</i>	<i>OER u</i>
Austria	8.6	34					
Belgium	11.1	44				1	
Bulgaria	7.1	28					
Croatia	4.3	17					
Cyprus	0.8	3					
Czech Republic	10.8	43					
Denmark	5.7	23	3			1	
Estonia	1.3	5					
Finland	5.5	22				1	
France	65.0	260	9	1		2	
Germany	82.6	330	2		12		
Greece	11.1	44					
Hungary	9.9	40					
Ireland	4.7	19		1			1
Italy	61.1	244	2		5	2	
Latvia	2.0	8					
Lithuania	3.0	12					
Luxembourg	0.5	2					
Malta	0.4	2					
Netherlands	16.8	67	4	3	1	4	
Poland	38.2	153				1	

<i>Country</i>	<i>Pop (m)</i>	<i>#HEPs</i>	<i>C'rsera</i>	<i>F'Learn</i>	<i>Iiversity</i>	<i>OEC</i>	<i>OER u</i>
Portugal	10.6	42					
Romania	21.6	86					
Slovakia	5.6	22					
Slovenia	2.1	8					
Spain	47.2	189	5	2	1	20	1
Sweden	9.7	39	1	1		1	
UK	63.8	255	3	30	2	2	3
Iceland	0.3	1					
Norway	5.1	20		2			
Switzerland	8.2	33	4	1	1	1	
Montenegro	0.6	2					
Russia	142.1	568	6		4	1	
Serbia	9.4	38					
Turkey	75.0	300	1			3	
Ukraine	42.5	170					

Putting it simply, MOOCs with senior institutional support (usually necessary to join a consortium) have very little traction in most EU countries, being of relevance to only a small minority of institutions, with the exception of UK, France, Germany and Spain.

4.3 Distance (usually online) learning

4.3.1 Overview

Distance learning at HE level is widespread in the UK (found in almost every large university) and also found to a substantial extent in Spain, France and Sweden. To a smaller extent it is found wherever there is an open university (Germany, Portugal, Greece, Cyprus) or other dedicated distance learning provider (such as Danube University Krems,⁷³ Austria). In some small countries such as Cyprus, Lithuania, Ireland, and especially Cyprus, activity from providers is high as a ratio to the population.

The most recent comprehensive detailed report on institutions which are providers of distance learning was the Re.ViCa Handbook and associated wiki: the Handbook was published in late 2009 but the wiki was updated to some extent during 2010-11.⁷⁴ Usefully, once an institution starts distance learning it rarely stops it – thus apart from occasional mergers and very occasional closures these institutions listed in 2009 (now 7 years ago – which seems a long time to many young researchers) are still active.

The Distance Learning Portal,⁷⁵ part of the StudyPortals service, has a focus on programmes not institutions but each programme cites the institution offering it and this enables the reader, with work, to extract the list of institutions. Such a task, while useful for later work in D-TRANSFORM, is beyond the scope of this Report – here we focus on programmes.

⁷³ <http://www.donau-uni.ac.at/en/>

⁷⁴ Handbook – <http://revica.europace.org/Handbook.php>

wiki – http://www.virtualschoolsandcolleges.eu/index.php/Main_Page

⁷⁵ <http://www.distancelearningportal.com>

Business models for opening up education

<i>Country</i>	<i>Pop (m)</i>	<i>#HEPs</i>	<i>#programmes</i>	<i># per million pop</i>
Austria	8.6	34	35	4.0
Belgium	11.1	44	12	1.0
Bulgaria	7.1	28	9	1.2
Croatia	4.3	17	1	0.2
Cyprus	0.8	3	65	81.2
Czech Republic	10.8	43	2	0.1
Denmark	5.7	23	16	2.8
Estonia	1.3	5	2	1.5
Finland	5.5	22	22	4.0
France	65.0	260	108	1.6
Germany	82.6	330	211	2.5
Greece	11.1	44	55	4.9
Hungary	9.9	40	3	0.3
Ireland	4.7	19	72	15.3
Italy	61.1	244	120	1.9
Latvia	2.0	8	7	3.5
Lithuania	3.0	12	43	14.3
Luxembourg	0.5	2	1	2.0
Malta	0.4	2	2	5.0
Netherlands	16.8	67	136	8.0
Poland	38.2	153	18	0.4
Portugal	10.6	42	15	1.4
Romania	21.6	86	1	0.0
Slovakia	5.6	22	2	0.3
Slovenia	2.1	8	1	0.4
Spain	47.2	189	200	4.2
Sweden	9.7	39	45	4.6
UK	63.8	255	2266	35.5
Iceland	0.3	1	0	0.0
Norway	5.1	20	11	2.1
Switzerland	8.2	33	42	5.1
Montenegro	0.6	2	0	0.0
Russia	142.1	568	16	0.1
Serbia	9.4	38	2	0.2
Turkey	75.0	300	1	0.0
Ukraine	42.5	170	0	0.0
				in contrast
United States	318.9		3951	12.3
Australia	23.1		1758	76.1
New Zealand	4.5		101	22.4

4.3.2 Helicopter tour

UK

The United Kingdom has its own open university which until recently was the only purely distance learning provider; it is now joined by Arden University, a private university. The majority of UK public universities deliver some distance learning, except for the small (usually newer) institutions. A particular feature of the UK is the public-private partnership model between a public HE provider and a private company, such as the University of Liverpool with Laureate Systems, or the University of Essex with Kaplan⁷⁶ – and several more – often targeting students outside the UK more than those inside. See section 5.1 for more details.

StudyPortals records 2194 DL programmes offered at higher education level.

Spain

Spain has two public open universities (UNED and UOC)⁷⁷ and also the private Madrid Open University (UDIMA).⁷⁸ Several other universities deliver distance learning. See section 5.2 for more details.

StudyPortals records 201 DL programmes offered at higher education level.

France

France has a long tradition of distance learning, though best known for the CNED⁷⁹ operating at ISCED 3 and 4 level. See section 5.3 for more details.

StudyPortals records 109 DL programmes offered at higher education level.

Italy

Italy set up some years ago a network of telematic universities – private universities specialised in e-learning. The best known is the International Telematic University UNINETTUNO.⁸⁰ See section 5.4 for more details.

StudyPortals records 121 DL programmes offered at higher education level – several of these come from public universities.

Hungary

Hungary is not very active in distance learning.

StudyPortals records 3 DL programmes offered at higher education level – including one from a traditional public university.

Ireland

Ireland some years ago set up the National Distance Education Centre, now part of the National Institute for Digital Learning at Dublin City University.⁸¹ Hibernia College⁸² is a private provider of distance learning, active in the area of teacher training. Several other public HE institutions and private providers offer some distance learning.

StudyPortals records 72 DL programmes offered at higher education level, a high number for a small country.

⁷⁶ <http://info.university-liverpool-online.com> and <http://online.essex.ac.uk>

⁷⁷ UNED – <http://portal.uned.es>; UOC – <http://www.uoc.edu/portal/en/>

⁷⁸ <http://www.udima.es>

⁷⁹ <http://www.cned.fr>

⁸⁰ <http://www.uninettunouniversity.net/en/universita.aspx>

⁸¹ <http://dcu.ie/nidl/index.shtml>

⁸² <http://hiberniacollege.com>

German-speaking nations

In *Germany* the German Open University (FernUniversität in Hagen)⁸³ is the main public provider of HE distance learning, but over a limited range of subjects. The German government is aware that there is inadequate provision of DOL: a study, OPULL, has recently been completed.⁸⁴ StudyPortals records 211 DL programmes offered at higher education level.

In *Austria* there is little provision of DOL. Danube University Krems⁸⁵ is a regional university with a specific mission for distance learning. A new commercial provider WWEDU was trying to make headway⁸⁶ but then closed.⁸⁷ StudyPortals records 35 DL programmes offered at higher education level, a high number for a small country.

Switzerland

Switzerland had an active Swiss Virtual Campus⁸⁸ programme until 2008 and several universities offer distance learning.

StudyPortals records 42 DL programmes offered at higher education level.

Scandinavia

Sweden has had a complicated history in distance learning. The elite universities on the whole do not offer much distance learning – however, Uppsala University has a significant DL offering due, but only in part, to its incorporation of Gotland University College, who were very active in distance learning.⁸⁹ Several university colleges are very active, including Dalarna University.⁹⁰ StudyPortals records 45 DL programmes offered at higher education level.

Norway is less well served but as a rich country it supports its face to face students well. Thus StudyPortals records just 11 DL programmes offered at higher education level.

Denmark has little interest in distance learning. StudyPortals records 16 DL programmes offered at higher education level

Finland had a consortial Finnish Virtual University model which seems to have faded away – energies recently have been going into mergers of Finnish universities. StudyPortals records 22 DL programmes offered at higher education level.

Baltic States

The *Baltic States* have their own traditions and suppliers of distance education, despite their small populations. Of the three, Lithuania is by far the most active: StudyPortals records 43 DL programmes offered at higher education level.

Portugal

Portugal has its own open university, Universidade Aberta,⁹¹ which was a traditional print-based provider but then went through an innovation phase into digital learning. A few other universities offer some distance learning.

StudyPortals records just 15 DL programmes offered at higher education level.

⁸³ <https://www.fernuni-hagen.de/english/>

⁸⁴ http://www.leuphana.de/fileadmin/user_upload/Forschungseinrichtungen/ipm/opull/Kathi_EduLearn_Paper.pdf.

⁸⁵ <http://www.donau-uni.ac.at/en/>

⁸⁶ http://campus.wwedu.com/intro_en

⁸⁷ <http://www.nachrichten.at/nachrichten/wirtschaft/wirtschaftsraumooe/WWEDU-Insolvenz-26-Mitarbeiter-und-150-Glaebiger-betroffen;art467,1450001>

⁸⁸ <http://www.virtualcampus.ch>

⁸⁹ <http://www.uu.se/en/admissions/freestanding-courses/>

⁹⁰ <http://www.du.se/en/Study-at-DU/Courses-A-O/Distance-Web-Based-Courses/>

⁹¹ <http://www.uab.pt/web/guest/home>

Greek-speaking lands

Greece has the Hellenic Open University.⁹² There is an active set of private HE providers but there are issues with accreditation. StudyPortals records 55 DL programmes at higher education level.

Cyprus has an open university, a public provider.⁹³ The private University of Nicosia (UNIC) is also known in distance learning circles.⁹⁴ StudyPortals records 65 DL programmes offered at higher education level – very high for such a small country.

Eastern EU

The South Eastern EU (*Romania, Bulgaria* etc) do not feature on StudyPortals.⁹⁵

Poland is seen by analysts as a potential growth area for online learning. There is some distance learning provision and a tradition of innovation including in OER. StudyPortals records 18 DL programmes offered at higher education level.

Others

Malta has a hegemonic university well embedded into government and despite some studies on becoming a “distance learning hub for the Mediterranean”, there is little activity.

Rest of Europe outside the EU and EEA

The European countries outside the EU/EEA do not support many DOL providers, with the notable exception of the large states of *Russia* and *Ukraine*.

Russia has a long tradition of distance learning. Perhaps the best-known university in Russia with DOL capability is MESI⁹⁶ – the Moscow State University for Economics, Statistics and Informatics – a member of EADTU. StudyPortals records 16 DL programmes offered at higher education level – this is a massive underestimate given the long history of distance learning in the country.⁹⁷

Ukraine also had a tradition of distance learning from Soviet times but little is heard recently and no programmes are listed on StudyPortals. The Re.ViCa page on Ukraine, finalised in 2010, describes several universities active in DL⁹⁸ and another portal site lists 36 DL programmes.⁹⁹

The non-EU *Yugosphere* countries and *Albania* are too poor or still emerging from conflict situations, with the exception of Croatia where there are potential students but a lack of internal DL providers.

Surprisingly the *Caucasus* states (normally assigned by analysts to Europe as well as to Asia), even *Georgia*, has less developed DL provision than might be expected.

Most interesting are the European *microstates*. It is impossible to consider them individually, but no state is too small but that it has to consider the issue of higher education for its children. Those who love minutiae may wish to note that *Andorra* has a public university including a centre for distance studies and also a private institution offering DL.¹⁰⁰

The UK Crown Dependencies are in general underprovided for higher education. The UK Open University is active in the *Isle of Man* and some north-western UK universities (e.g. Chester, Liverpool John Moores) have links with the Isle. The UK Open University also is active in the *Channel Islands* and there are some local developments.

⁹² <http://www.eap.gr/en/>

⁹³ <http://www.ouc.ac.cy/web/guest/home>

⁹⁴ <http://www.unic.ac.cy/distance-learning/about-distance-learning>

⁹⁵ but Bulgaria has 2 courses listed on the distancelearningstudy.eu portal

⁹⁶ <http://eng.mesi.ru/about/>

⁹⁷ <http://www.irrodl.org/index.php/irrodl/article/view/1165/2216>

⁹⁸ <http://www.virtualschoolsandcolleges.eu/index.php/Ukraine>

⁹⁹ <http://www.distancelearningstudy.eu/s/3319/74616-Distance-learning-study-in-English.htm?pa=144>

¹⁰⁰ https://ca.wikipedia.org/wiki/Universitat_Oberta_de_la_Salle_-_Andorra

5. Four countries, four (or five) paths

This Chapter provides country-specific detail on the four main partner countries of UK, Spain, France and Italy. UK does not have a unitary fees regime so we consider England and Scotland separately.

The next chapter (Chapter 6) looks at three other relevant countries (Ireland, Francophone Belgium and Hungary) and establishes a recipe for providing reports on further European countries. This is designed to help those in university management to plan their business models for OER, MOOCs and accredited distance learning – thus looking ahead to the D-TRANSFORM Leadership Workshops.

In view of length restrictions, for our information on fees we focus mainly public sector institutions. This is because fee levels for these are more uniform within countries and also better documented, in particular by Eurydice (2015) and the various “Study in Country” sites.

Each country is described where feasible within a structured rubric.

5.1 United Kingdom: England and Scotland

The UK four home nations have to be treated separately. For reasons of space and effort, and with apologies to Wales and Northern Ireland, we look only at England (large country, high fees) and contrast it with Scotland (small country, free fees – for full-time students).

Wales has several universities active in distance learning and MOOCs including Aberystwyth University, Cardiff University and the University of South Wales.¹⁰¹ In Northern Ireland, Ulster University is active in distance learning and Queen’s University Belfast is a member of FutureLearn.

5.1.1 England

Language issues

English is the official language. There is no recognised minority language in England.

Universities

The Universities UK organisation has over 100 members.¹⁰² There are around 200+ FE colleges offering some HE.¹⁰³ There are an increasing number of private HE providers becoming visible. In fact there have for some years been a large number (600 or more) of “alternative providers” (all private),¹⁰⁴ including some long-established online providers like the Open College of the Arts.¹⁰⁵ *Several private providers and most alternative providers do not accredit their own degrees – instead accreditation is handled by established universities including the UK Open University.*¹⁰⁶

Most English universities now have a strong focus on digital skills and wider employability skills – at several institutions covering self-employment, social enterprises and start-ups. MOOCs are one of the ways, but not the main one, by which such skills are inculcated.

The postgraduate full-time market for UK students has not been healthy for some time, but the continuing inflow of foreign students to some extent makes up for UK market weakness. The new postgraduate loans scheme will help, more so now that it is not restricted to students under 30.

The Research Excellence Framework (UK-wide) in its latest incarnation continues the long UK tradition of reviewing universities’ research performance and linking the review to funding. Few would disagree that this has for some time caused a skewing effect in academic priorities. Few other countries have a similar exercise of such severity. All universities are subject to REF.

¹⁰¹ a partner of UNIC in UNICAF – <https://www.unicaf.org>

¹⁰² <http://www.universitiesuk.ac.uk/aboutus/members/Pages/default.aspx> – and note that a few more established private providers are also members, such as Regent’s University London

¹⁰³ <http://www.hefce.ac.uk/reg/register/search/Overview>

¹⁰⁴ almost none outside England apart from the Interactive Design Institute in Edinburgh

¹⁰⁵ <http://www.oca.ac.uk>

¹⁰⁶ the schemes are not simple to describe – see <http://www.hefce.ac.uk/reg/gateways/Partnerships/>

Distance learning

Almost all large UK HE providers offer some distance learning, though mostly at Masters level apart from the UK OU. The UK OU is still an unchallenged hegemonic provider in the undergraduate degree distance learning market.¹⁰⁷ However, there are a few long-established niche providers at undergraduate level of which the best known is the University of Derby Online (UDOL).¹⁰⁸ Some private providers of face-to-face education also operate in the undergraduate distance sector, such as the University of Law¹⁰⁹ and the London School of Business and Finance.¹¹⁰

While the full-time undergraduate UK/EU market and the international market remain buoyant,¹¹¹ the same is not the case for the part-time and DL market. The UK OU has made very public its significant decline in numbers.¹¹²

In the distance HND and Foundation Degree market (ISCED 5 short-cycle), there are several providers including a few “HE in FE” providers and private institutions. There are also a number of online FE providers who so far have not bridged over from FE to HE (even HND), and some have even withdrawn from HE back to FE,¹¹³ for reasons not clear.

The postgraduate part-time market is not healthy, and international (non-EU) students cannot come to study part-time in the UK for visa reasons. The subset of the market delivering distance learning has no such restrictions and appears an area of growth to many universities even though the overall envelope is in fact not growing. Other than specialised or small institutions there are now only a handful of Universities UK¹¹⁴ members not delivering some postgraduate distance learning. On the other hand, there are only a dozen or so such universities with more than 1000 DL students and only University of London International with more than 10000.¹¹⁵

Contrary to gloomy predictions over 20 years of “tanks on the lawn”,¹¹⁶ the expected “invasion” of US-based or US-funded providers into England (or indeed the UK) has been rather limited. Other than RDI/Capella,¹¹⁷ such providers¹¹⁸ partner with one or at most two UK HEIs and then steadily try to grow their market from that base. Several large US players such as Academic Partnerships¹¹⁹ or University Ventures¹²⁰ have nil visible direct exposure in the UK market. The large publishers, with the exception of Pearson and also Wiley,¹²¹ have shown little interest and Pearson has been cautious about moving online in strength in UK. The one exception to this rule is Global University Systems¹²² which has been steadily growing and consolidating its stable of private providers, including the London School of Business and Finance and the University of Law, who do offer online programmes.

¹⁰⁷ potentially this might change in time with the approval of Arden University, built out of the RDI/Capella operation

¹⁰⁸ UDOL – <http://www.derby.ac.uk/online/home-page>

¹⁰⁹ <http://www.law.ac.uk/postgraduate/i-gdl/> for their online course

¹¹⁰ <http://www.lsbfi.org.uk/study-online>

¹¹¹ though there are longer-term health warnings on overseas students from British Council etc, and not only because of visa issues

¹¹² several other European OUs have had similar or in one case worse declines

¹¹³ such as ICS – <https://www.icslearn.co.uk/courses/business-and-management/>

¹¹⁴ <http://www.universitiesuk.ac.uk> – the association of almost all UK universities

¹¹⁵ ignoring the Oxford Brookes/ACCA collaboration on accounting qualifications which used to heavily distort the HESA DL figures

¹¹⁶ I first heard the phrase “tanks on the lawn” in connection with the Mulberry Lawn on the Milton Keynes campus of the UK OU from John Daniel the then VC circa 1995

¹¹⁷ now called Arden University

¹¹⁸ Kaplan with Essex, Laureate with Liverpool and Roehampton, Wiley with Birmingham, UNIC with USW, Keypath with Coventry, RDI/Capella with several in the past

¹¹⁹ <http://academicpartnerships.com>

¹²⁰ <http://universityventures.com> – see also <https://www.crunchbase.com/organization/university-ventures#/entity>

¹²¹ <http://www.birmingham.ac.uk/news/latest/2014/10/wiley-online-learning-20-10-14.aspx>

¹²² <http://thepiennews.com/news/global-university-systems-to-restructure/>

MOOCs

The FutureLearn consortium of MOOC providers is very strong in the UK. Yet the division between those universities in FutureLearn and those not in is now not clear. Some very high-ranking universities are not in FutureLearn; no low-ranking university is in FutureLearn, yet in the middle there can be universities of similar rank and style, one in and one not. This makes it very unclear for outsiders to determine what is the added value of FutureLearn to a UK university. By and large in England (and indeed the UK), universities not in FutureLearn are not active in MOOCs – yet there is no clear technical or business reason for this especially since the two main commercial VLE platforms, Canvas and Blackboard, have modes to deliver MOOCs.

Some English universities are in other MOOC consortia, but only a very few.

OER

After substantial funding of OER in HE for some years,¹²³ there is now minimal central funding, much less activity, a smaller less vibrant OER community, and a pivot to MOOCs.

However, showing that good things can come from surprising sources, much of the current activity in Open Access and to some extent OER and MOOCs could be traced back to REF pressures, in particular on impact metrics.

Fees and funding

Fees are very high by EU standards, but there is a loan scheme.

The fee tabulation for public institutions in England looks as follows:

<i>Full-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	high	high
Non-EU students	very high	very high

<i>Distance</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	medium	high
Non-EU students	high	high

<i>Part-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	high	high
Non-EU students	N/A	N/A

All students have to pay fees – some may get loans and a few get grants.

For full details see Eurydice (2015), page 45, on *The United Kingdom – England*. In terms of fees this notes:

- 1st cycle full-time – fees are set by institutions and capped at GBP 9000 [€9900]¹²⁴ for institutions with an approved access plan (to safeguard fair access for low income and other under-represented groups) and GBP 6000 [€6600] for institutions without an access plan. The average fee for 2014/15 was GBP 8601 [€9461] before fee waivers (discounts offered by institutions) and GBP 8448 [€9293] after fee waivers. Students are not required to pay up front and can apply for a loan to cover the full fee. Repayments

¹²³ <https://www.jisc.ac.uk/rd/projects/open-education>

¹²⁴ we use a long-term conservative exchange rate of £1 = €1.1

are income-contingent and are set at 9% of earnings above the threshold of GBP 21000 [€23100]; interest rates are Retail Price Index plus 3%.

- 1st cycle part-time – fees are set by institutions and capped at GBP 6750 [€7425]. Students studying a course of at least 25% intensity are not required to pay up front and can apply for a loan to cover the full fee. Repayments as for full-time students.
- 2nd cycle – fees are unregulated and vary widely. The ‘most common’ shown (GBP 4052 [€4457]) represents an indicative fee level for research students in 2014/15 set by Research Councils UK.
- For 1st and 2nd cycle international students fees are unregulated.

Our view is that the student loans system has settled down into general acceptance among those providers offering mainly full-time provision, with far less acceptance and far more deleterious effects among part-time and DL providers.

Online learning

It has been argued that there was a period in England after 2010 when there was “uncontrolled” growth in student loans especially at HND level (short-cycle HE, ISCED 5) and a growing belief of the “lack of quality” in the private HE system. Yet perusal of recent quality reports shows that even small private online providers, such as OCA and IDI, as well as large providers such as College of Law (now University of Law), can get glowing reports from QAA.¹²⁵ In addition private providers such as UNIC (Cyprus-based, operating in partnership with USW) are taking care to get their quality procedures approved by supranational teams of evaluators such as from EADTU.¹²⁶ The companion report by Rivera-Velez and Thibault (2016) summarises the policy framework.

5.1.2 Scotland

Language issues

English is the only official language.

However, the Gaelic Language (Scotland) Act 2005 established a language development body, *Bòrd na Gàidhlig*, “with a view to securing the status of the Gaelic language as an official language of Scotland”. Yet, Scottish Gaelic is not an official language of the EU or the UK – although classed as an Indigenous language under the European Charter for Regional or Minority Languages, which the UK government has ratified.

There are several providers (Dundee, UHI) offering distance courses to teach Gaelic; and Sabhal Mòr Ostaig (a college of UHI) offers Gaelic-medium distance learning in Gaelic culture, heritage and arts.¹²⁷

Universities

There are 19 higher education providers in Scotland, including three specialised HE providers and the Open University in Scotland: these 19 form the members of Universities Scotland.¹²⁸ Scotland has been preserved from the HE mergers that have affected most other UK home nations. In addition to HE providers, most FE colleges offer some HE courses, sometimes under validation arrangements, sometimes not.

Scotland runs a “pure” continental-style funding regime,¹²⁹ where fees for full-time undergraduate higher education are free.¹³⁰ However, postgraduate higher education courses do charge fees,

¹²⁵ for more on such reports see the SEQUENT Showcases report – http://www.sequent-network.eu/images/Guidelines/Sequent_Showcases.pdf

¹²⁶ SEQUENT Showcases report, pp. 9-10

¹²⁷ <http://www.smo.uhi.ac.uk/en/cursaichean/cursaichean-air-astar/>

¹²⁸ <http://www.universities-scotland.ac.uk/>

¹²⁹ many EU countries now have fees, but often set at “low” levels, i.e. under €2000 per year

¹³⁰ full details of the current situation are in <http://www.gov.scot/Resource/0048/00485542.pdf>

though students are usually eligible for a modest loan.¹³¹ In addition, part-time undergraduate courses (including DOL) do charge fees, though eligible learners (those on modest incomes) can get a Part-Time Fee Grant.¹³²

Distance learning

Distance learning is offered by all Scottish universities with many of the ancient universities (Edinburgh, Aberdeen) as active as old but less ancient (such as Dundee) and more recently founded institutions (Heriot-Watt, Robert Gordon etc), but the rest are all active at a more modest level (hundreds not thousands of students).

The Scottish college sector has had two rounds of consolidation into a smaller set of regional and metropolitan colleges. As usual, this has caused a decline of distance learning in this sector.

While UK OU in Scotland has a dominant position in undergraduate distance learning it is just one of many providers in postgraduate distance learning. Interestingly and contrary to popular belief there are two private providers in Scotland,¹³³ the Interactive Design Institute and ICS Learn, though the latter is not currently active in HE provision.

MOOCs

UHI is an active member of the OER universitas and the universities of Aberdeen, Dundee, Edinburgh and Strathclyde are active in FutureLearn.

OER

Scotland was later to the “OER conversation” than some home nations of the UK but now there is an active Open Scotland lobby group and the project *Opening Educational Practices in Scotland* is led by the OU and involves UHI, Edinburgh, Glasgow and Strathclyde universities.¹³⁴ In addition UHI is an active member of the OER University.

Fees and funding

The fee tabulation for public institutions in Scotland looks as follows:

<i>Full-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	free*	high
Non-EU students	very high	very high

<i>Distance</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	medium	high
Non-EU students	high	high

<i>Part-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	high	high
Non-EU students	N/A	N/A

For full details see Eurydice (2015), page 48, on *The United Kingdom – Scotland*. In terms of fees this notes (the situation is complicated so read carefully – and note our italics):

¹³¹ only up to £3400 (£1700 if studying part-time) – see last URL

¹³² page 26 of last URL: the rules are complicated

¹³³ other than theological colleges

¹³⁴ <https://oeppscotland.org>

- * For the first cycle, the Scottish Government pays the tuition fees for full-time Scottish and EU students (*with the exception of those from England, Wales and Northern Ireland*). For 2014/15, fees are set at GBP 1820 [€2002].
- Fees for part-time students are unregulated but are usually a proportion of the full-time equivalent fee.
- Scottish (and non-UK EU) students do not pay tuition fees to study at Scottish universities, *but must pay full fees to study at universities in other parts of the UK*. Students from England, Wales and Northern Ireland are required to pay fees to study at universities in Scotland. Fees are charged to students from the rest of the UK at a level of up to a maximum of GBP 9000 [€9900], in line with the maximum fee charged in the rest of the UK. The GBP 9000 [€9900] cap on fees for students from the rest of the UK is set by the sector *as part of a voluntary agreement*.
- Fees for international (non-EU) students are unregulated and set by the higher education institutions.
- The fee and support system has been developed for students in the first cycle. *In the second cycle, fees are unregulated, differing by field of study and by mode of attendance (i.e. full- or part-time).*

Online learning

Unlike England and Wales there has not been any strategic investment in e-learning from the funding council in the last 7 years, until very recently, focussed on OER via the Open Educational Practices in Scotland consortium led by the UK OU in Scotland.¹³⁵ The companion report by Rivera-Velez and Thibault (2016) summarises the policy framework.

5.2 Spain

In terms of education, Spain is neither a unitary state like France nor a federation of distinctly different states like the UK, nor even a federal country of states with very similar education policies and funding regimes like Germany. It is divided into 17 components called autonomous communities, who are largely in charge of education including universities. Policies in fees and grants vary slightly between these.

Language issues

The Spanish language is the official language in every autonomous community, but six autonomous communities have also other official languages, in particular Catalan and Basque.

Universities

There are 76 universities in Spain. Of these 24 are private, including 7 affiliated with the Catholic Church.

Distance learning

Spain has two public open universities (UNED and UOC) and also the private Madrid Open University (UDIMA). Several other universities deliver distance learning.

StudyPortals records 201 DL programmes offered at higher education level.

MOOCs

Spain has 5 members of Coursera, 2 of FutureLearn and 1 of iversity. Many other universities offer MOOCs.

OER

Spain is also active in OER.

¹³⁵ <http://www.open.ac.uk/iet/main/research-innovation/research-projects/opening-educational-practices-scotland-oeps>

Fees and funding

The fee tabulation for public institutions in Spain looks as follows:

<i>Full-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	low	low
Non-EU students	low	medium

<i>Distance</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	low	low
Non-EU students	low	medium

<i>Part-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	low	low
Non-EU students	N/A	N/A

For full details see Eurydice (2015), page 25, on *Spain*. In terms of fees this states, but rather vaguely:

- The amount of fees is determined by the kind of studies, the number of ECTS taken and the number of exams failed in each subject. In addition, amounts differ between regions as each one has a different fee range. *There is no difference in fees between full and part-time students.*
- For international students (from outside the European Union) who do not have resident status in Spain, *the fees can be increased, depending on the region.*
- Exemptions from fees are possible and based on need criteria. In addition, large families and disabled persons have very significant discounts, and may even be exempt.

The situation with grants is also very complicated. In summary, they are needs-based not merit-based. Highlights are that:

- All students who receive grants are also exempt from paying fees.
- Students can receive different grant components depending on their family income, grades and other circumstances. The minimum grant is EUR 60 plus a waiver from tuition fees. The maximum grant in 2014/15 was EUR 6840.49.
- The approximate 29% of students receiving grants include, apart from those of the general call, those who are partially exempt of paying fees for large family, and collaboration scholars.
- No loans, no tax relief for parents and no family allowances.

MastersPortal provides some additional information especially on private universities and second cycle courses:¹³⁶

The tuition fee for studying at a public university in Spain is approx. 1000 EUR per year.

Students have to pay registration and tuition fees at public universities in Spain. The total amount paid varies depending on the course and its credit worth. Enrolment fees for bachelors degrees (180 credits or 60 credits per year) at public universities in Spain vary between 500 EUR and 1120 EUR per academic year.

¹³⁶ <http://www.mastersportal.eu/articles/357/tuition-fees-and-living-costs-for-studying-in-spain.html>

At private universities the registration fee for bachelors degree studies varies between 5000 EUR and 12000 EUR per academic year, depending on the degree, the institution, and the students academic performance. The fees at private universities are established by the university itself.

*The fees for official masters and doctoral degrees at public **and private** universities are regulated by the government.* A master program is usually worth 90-120 credits, except a Master of Science which is worth 240 credits, also 60 credits per year. As an example, a masters course comprising 60 ECTS credits may cost between 960 EUR and 1800 EUR.

This unusually seems to favour bachelors courses over masters in the business models even at private universities.

Information is scanty but the indications are that in general international students pay fees which are the same as or only a little higher than EU students.

Online learning

There are no policies to facilitate online learning. The companion report by Rivera-Velez and Thibault (2016) summarises the policy framework.

5.3 France

Language issues

The official language is French.

Universities

The public university system in France is in process of reorganisation. There are also other types of higher education institution including the grandes écoles and the private universities both secular and religious.

Distance learning

France has a long tradition of distance learning, though best known for the CNED operating at ISCED 3 and 4 levels.

StudyPortals records 109 DL programmes offered at higher education level (ISCED 5-8).

In France distance learning is regarded as an aspect of continuing education. The POERUP report on France¹³⁷ summarises the situation well:

Continuing education is the type of training geared toward those who have left basic education. It is aimed at salaried workers, the unemployed, and all adults wanting training or a diploma. The most well-known field is continuing professional development.

Funds for continuing education in France come from companies (40%), from the state (22%), (Pôle emploi among other agencies), from the regions (14.4%), from the government for its own agents (19%), and from households (4%).

Continuing education can be provided by companies (when they have in-house training departments), by government agencies (GRETA, AFPA, Universities, CNAM, etc.), or by private institutions. In 2012, there were 48,000 training institutions, public and private, in France.¹³⁸

MOOCs

France is particularly active in the area of MOOCs. In addition to national initiatives, 9 universities are members of Coursera and 1 of FutureLearn.

¹³⁷ by Florence Ducreau and Catherine Claus Demangeon, University of Lorraine – <http://poerup.referata.com/wiki/France>

¹³⁸ <http://www.education.gouv.fr/cid217/la-formation-tout-au-long-de-la-vie.html>

OER

OER is also active.

Fees and funding

Wikipedia usefully summarises the situation as follows:¹³⁹

Since higher education is funded by the state, the fees are very low; the tuition varies from €150 to €700 depending on the university and the different levels of education. (licence, master, doctorate). One can therefore get a master's degree (in 5 years) for about €750 – €3500. The tuition in public engineering schools is comparable to universities, albeit a little higher (around €700). However it can reach €7000 a year for private engineering schools, and some business schools, which are all private or partially private, charge up to €15000 a year.

Thus the fee tabulation for public institutions in France looks as follows:

<i>Full-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	very low	very low
Non-EU students	very low	very low

<i>Distance</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	low	low
Non-EU students	low	low

<i>Part-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	very low	very low
Non-EU students	N/A	N/A

For fuller details see Eurydice (2015), page 26, on *France*. In terms of fees this states:

- The amount of fees per year fixed by the Ministry of Higher Education and Research is EUR 184 in the first cycle (L1, L2, L3) and EUR 256 in the second cycle (M1, M2). In addition fees of EUR 215 per year, irrespective of the cycle of studies, are charged to all students aged 20-28. These fees are related to the social security system. *A number of universities have decided to add associated costs related to specific services (e.g. for diplomas related to continuing learning and training).* In some public universities, depending on the type of studies and the qualifications acquired, the fees can reach more than EUR 2000 per year.
- Fees in the grandes écoles and engineering schools vary, but the most common amount is EUR 600 per year – not including fees related to social security and partnerships with universities. Tuition fees in some institutions reach up to EUR 10000 per year, depending on family income. However, there are also grandes écoles which not only deliver education without charging fees, but may even pay some students (such students are prospective civil servants and receive a wage from the State), e.g. in école polytechnique and écoles normales supérieures.
- Students who receive a grant (34.7% of the student population in 2014/15) are exempted from fees.
- *Non-EU students pay the same fees as those from within the EU.*

¹³⁹ <https://en.wikipedia.org/wiki/France#Education>

There is some devil in the detail. MastersPortal notes:¹⁴⁰

Grants are awarded on the basis of financial need to students that are less than 28 years of age. The amount awarded for the need-based grant depends on the assessment of social criteria, and varies between 1606 and 4600 EUR per year. The merit-based grant ranges from 1800 to 6102 EUR. At the same time, those eligible for a grant receive exemption or reduction in health cover.

Loans are also available with a maximum amount of 15000 EUR, but less than 0.1 % of university students take out such a loan.

Parents are eligible for tax relief if students are financially dependent on them and are less than 25 years old. The amount of tax relief is proportional to the amount of taxable income of the household.

Family allowances are paid for two or more dependent children that are under 20 years old. The minimum amount is 127 EUR per month and increases with the number of eligible children. An additional amount of 63 EUR per month is paid for every child that is aged 16-20 years.

There are signs that the universities are being given greater discretion to impose their own charges, as the government struggles to find a way to fund higher education, and the universities are granted greater autonomy. Some universities have been granted new powers over their budget, and it is likely this will lead to an increase in fees.

Online learning

The companion report by Rivera-Velez and Thibault (2016) summarises the policy framework.

5.4 Italy

Italy is divided into 20 regions, five having a special autonomous status that enables them to enact legislation on some of their local matters.

Language issues

Italian is the official language. However, French is a second official language in the Valle d'Aosta, German the same in South Tyrol, Slovene in the provinces of Trieste, Gorizia and Udine, and there are additional local situations with other minority languages.

Universities

Higher education provision in Italy comes mainly from the public universities, but there are also private universities (including the telematic universities specialised in e-learning) and prestigious graduate schools such as the Scuola Normale Superiore di Pisa. The University of Bologna and the University of Padua are commonly accepted as the oldest public universities in Europe.

Distance learning

Around 12 universities and one consortium deliver distance learning.

StudyPortals records 122 DL programmes offered at higher education level. Interestingly 65 of these are online short courses, leading to some interesting synergies with MOOCs. Most of the rest are online Masters (34) but with 10 Bachelors programmes.

MOOCs

Italy has 2 members of Coursera (including Sapienza University of Rome) and 5 of iversity. Overall, MOOC offerings are not plentiful in Italy. The MOOC monitor lists, in addition of course to

¹⁴⁰ <http://www.mastersportal.eu/articles/355/tuition-fees-and-living-costs-in-france.html>

Politecnico di Milano, the Università Cattolica del Sacro Cuore, Università di Bologna and Università di Napoli Federico II as delivering MOOCs in the Italian language.

OER

OER is not very much evident in higher education, but there are several initiatives in schools.

Fees and funding

The fee tabulation for public institutions in Italy looks as follows:

<i>Full-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	low	low
Non-EU students	low	low

<i>Distance</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	low	low
Non-EU students	low	low

<i>Part-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	low	low
Non-EU students	N/A	N/A

For fuller details see Eurydice (2015), page 28, on *Italy*. In terms of fees this states:

- Higher education institutions (HEIs) define the fees at the beginning of the academic year and *they differentiate them according to the students' socio-economic background, field of studies, cycle, study status – full-time or part-time – and year of registration*. Furthermore, HEIs are obliged to exempt students benefiting from student support, and *they can also exempt some students on the basis of merit*. The overall amount of fees at the end of financial year should not be higher than 20% of public funding. The Ministry responsible for higher education sets the amount of the minimum fee for enrolment. For the academic year 2015/16, it is EUR 199.58.
- The fee amounts shown in the diagram are calculated on the basis of the most recent statistical data available (2013-2014). *International students pay the same fees as national students*.

Eductions.com notes that there are some additional aspects:¹⁴¹

Private universities in Italy are much more expensive.

Admission to “master universitari” and other specialized degree courses in Italy also have much higher tuition fees.

Doctoral students who receive university grants do not pay tuition fees, but non-grant holders are required to pay the tuition fees of their particular university.

Finally there are some planned reforms to bring Italy more into line with other countries which may change the parameters for business models.¹⁴²

¹⁴¹ <http://www.educations.com/study-guides/europe/study-in-italy/tuition-fees-6662>

¹⁴² Eurydice (2015) page 28, bottom of page

Business models for opening up education

- The inter-ministerial decree 9 December 2014, n. 893 between the Ministry of Education, University and Research and the Ministry of Economy introduced the 'standard cost for student'. *The aim is that students attending the same type of courses have the same allocation of resources by the state. Funding allocation should in future take account of the differences between the degree programmes, the number of regular students, and the average cost of university professors, as well as the regional economy and the financial situation of families.* New parameters are valid for the period 2014-16, but have not yet been implemented.

Online learning

The companion report by Rivera-Velez and Thibault (2016) summarises the policy framework. There is little policy relevant to online learning.

6. Extending this to the rest of Europe

The focus of this report is on UK, Spain, France and Italy – so this Chapter on other European countries is brief. We focus on three relevant countries and then make some general points.

The countries are:

1. Ireland – a small English-speaking country adjacent to the UK (sharing a land border)
2. Francophone community of Belgium – a French-speaking country adjacent to France
3. Hungary – the fifth partner country of the D-TRANSFORM consortium.

6.1 Ireland (Republic of Ireland)

Language issues

English is the main language.

Irish Gaelic is spoken as a first language by a very small minority of Irish people, and as a second language by a rather larger group: it enjoys constitutional status as the national and first official language of the Republic of Ireland – and so is an official language of the European Union. At university level, there are some requirements in a few universities for students and lecturers to have some fluency in Irish Gaelic but the situation is complicated and sensitive.

Universities

There are 21 public HE providers. In more detail, Ireland, like many continental EU countries, has a binary divide in its HE provision. There are 7 public universities (the members of the Irish Universities Association). There are also 13 public Institutes of Technology (comprising Institutes of Technology Ireland) and one institution, Dublin Institute of Technology, set up under special legislation.

Distance learning

The traditional distance learning provider in the Republic, the National Distance Learning Centre (abbreviated to OSCAIL in Irish Gaelic), was set up as an autonomous unit with Faculty status on the campus of Dublin City University in 1982. It has “provided adults all over Ireland with flexible access to third level education since 1982. Thousands of students have graduated with Dublin City University degrees through Oscail in that time”.¹⁴³ It is the Irish member of EADTU.

After initial success OSCAIL suffered from problems and after some government discussions it was re-embedded into DCU as the Open Education Unit, now part of the wider National Institute for Digital Learning.¹⁴⁴

There is distance learning available from some other HE institutions (UCD, Limerick, Galway, IT Sligo, etc.) but mostly at the level of cottage industry. In all there are 72 DL courses offered.¹⁴⁵

There are also private providers of distance learning, of which the best known is Hibernia College; but there are several others including the Institute of Public Administration.

Hibernia College is a long-established commercial HE provider. It has had great success in recent years developing online teacher training and delivering this in the UK via a consortium of new universities.¹⁴⁶ There is an old (2009) but good case study of Hibernia College.¹⁴⁷

The UK Open University operates in the Republic of Ireland via a pan-Ireland subsidiary with a head office in Dublin.

¹⁴³ <http://www.eadtu.eu/national-distance-education-centre-oscaill-ireland.html>

¹⁴⁴ <http://dcu.ie/nidl/index.shtml>

¹⁴⁵ <http://www.distancelearningportal.com/countries/14/ireland.html>

¹⁴⁶ <http://iteach.hiberniacollege.com/AboutiTeach/iTeachnbsppartnership/tabid/338/Default.aspx>

¹⁴⁷ http://www.virtualcampuses.eu/index.php/Hibernia_College_-_case_study

MOOCs

Trinity College Dublin is active in FutureLearn and IT Sligo has joined OER universitas.

OER

The Republic of Ireland has little activity in OER.

Fees and funding

The Republic of Ireland runs a variant of the “pure” continental-style funding regime. Most EU undergraduate students attending publicly funded HE courses do not have to pay tuition fees – fees are paid by the Department of Education and Skills.

However, EU postgraduate higher education courses do charge fees, though there is a means-tested fee contribution.

Part-time and distance learning courses have to charge fees since there is no funding council support – and there are no loans available. There seem no plans to change this – in fact plans formulated two years ago were withdrawn.

Fees for international students can be high.

The fee tabulation for public institutions in Ireland looks as follows:

<i>Full-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	medium*	high
Non-EU students	high	very high

<i>Distance</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	medium	high
Non-EU students	high	very high

<i>Part-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	medium	high
Non-EU students	N/A	N/A

* part usually paid by government, under complicated rules that are not applicable to all EU students

For full details see Eurydice (2015), page 23, on *Ireland*. This states:

- For the first cycle, *full-time EU students are exempt from full tuition fees if they are first-time undergraduates, hold inter alia EU/EEA/Swiss nationality in their own right, and have been ordinarily resident in an EU/EEA/Swiss state for at least three of the five years preceding their entry to an approved third level course*. However, these students nevertheless pay a ‘student contribution’ of EUR 3000 per academic year. Full-time EU students who do not meet the terms of the ‘free fees’ scheme must pay a consolidated fee covering both tuition fee and student contribution – *the average EU consolidated fee is EUR 6000*.
- For the second cycle, the majority of students pay tuition fees that are set by higher education institutions, and that may reach EUR 30000 per year.
- *Part-time fees are generally half of full tuition fees for full-time programmes.*
- **In both cycles, international student fees are generally two to three times higher than those of full EU fees and are set by the higher education institutions.**

Ireland is the first of the countries we are studying which offers needs-based and merit-based grants (though only to needs-based students!), but no loans, though there is tax relief – and no support for distance students (unless, unusually, full-time).¹⁴⁸

- Need-based grants are provided to full-time students by the Department of Education & Skills. Their amounts range from EUR 305 to 5915 per academic year, depending on means, family size and distance from institutions.
- Students who qualify for grants also have the student contribution or tuition fees paid on their behalf.
- *The same department provides bursaries with a value of EUR 2000 per academic year. The bursaries require qualification under both merit and need-based criteria.*
- Students need to satisfy specific conditions of residence, means, nationality and previous academic attainment to be eligible for grants. *Students have to be enrolled full-time.*
- *Tax relief is available for the expenses paid for tuition fees at a recognised higher education institution.*
- *No loans or family allowances.*

Online learning

Until recently there had for many years not been any strategic investment in e-learning from the government. However in 2014 the National Forum for the Enhancement of Teaching and Learning¹⁴⁹ was set up and has disbursed several million euro on technology-enabled pedagogic development, leading to a revitalisation of online learning in the sector (both universities and Institutes).

6.2 Francophone Community of Belgium

We use this name to avoid certain controversies.¹⁵⁰ The “country” comprises Wallonia (the Walloon Region) and French speakers in the Brussels Capital Region, comprising around 4.5 million people. It is sometimes called the Federation Wallonia-Brussels.

Language issues

The language of the Community is French, by definition.

Universities

Full-time higher education is provided by 42 institutions divided into three types: 6 universities, 20 university colleges and 16 arts colleges.¹⁵¹ All are members of the Academy for Research and Higher Education (ARES).

Distance learning

The reports on distance learning in Francophone Belgium are some years out of date but do not indicate much activity. There are 4 programmes offered by Distance Learning – 4 Masters degrees, three from THIERRY Graduate School of Leadership (in Barvaux) and one from the Catholic University of Louvain. Older reports cite the University of Liege as active. No Bachelors degrees are cited.¹⁵²

MOOCs

MOOC List cites just one Francophone MOOC starting in the January-June 2016 period.

OER

There is no information on OER.

¹⁴⁸ Eurydice (2015) page 23, bottom of page

¹⁴⁹ <http://www.teachingandlearning.ie>

¹⁵⁰ https://en.wikipedia.org/wiki/French_Community_of_Belgium

¹⁵¹ <http://www.studyinbelgium.be/en/content/higher-education-wallonia-brussels-0>

¹⁵² <http://www.distancelearningportal.com/countries/4/belgium.html>

Fees and funding

The fee tabulation for public institutions in the Francophone Community of Belgium looks as follows:

<i>Full-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	low	low
Non-EU students	medium	medium

<i>Distance</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	low	low
Non-EU students	medium	medium

<i>Part-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	low	low
Non-EU students	N/A	N/A

For full details see Eurydice (2015), page 9, on *Belgium – French Community*. This states:

- Fee limits are set by the government of the French Community of Belgium. Fee levels depend on the student's financial situation. For the academic year 2015/16, the maximum fee is EUR 836, the intermediate fee is EUR 374 (for students not receiving a grant but considered as lower income) and there are no fees for those students receiving a grant.
- There are some differences in fees between universities and non-university higher education institutions. Until 2017 non-university higher education institutions can charge complementary registration and administrative fees in addition to registration fees, but the total amount cannot exceed EUR 836/year. Those complementary registration and administrative fees range from EUR 0 (for grant holders) to EUR 179 depending on the type of programme and the financial situation of students; they apply to all students. These fees will continuously decrease until 2017 when they will cease to exist.
- Students from outside the EU have to pay additional specific fees. For programmes organised by university colleges and arts colleges, the additional specific fees (*droits d'inscription spécifiques*) are fixed by law: EUR 992 for professional-oriented programmes and EUR 1 487 for academic-oriented programmes in the 1st cycle; EUR 1984 for programmes of 2nd cycle. For programmes organised by universities, the law stipulates that the maximum amount should not exceed 5 times the registration fees. In practice, universities (through the Interuniversity Council) adopted harmonised amounts. Those amounts differ depending on the country of origin of the students. The complementary registration and administrative fees mentioned in the previous bullet remain applicable to non-EU students.

There are needs-based grants but no merit-based grants.

Intra-EU complications

There are complications caused by "excessive" flows of students from France to study in the French Community of Belgium. A summary of Case C-73/08 of the European Court of Justice states:

The French community, which provided well regarded higher education courses attractive to students from France, saw a significant increase in the number of students from other member States, in particular France, enrolling in its institutions of higher education, in

particular in nine medical or paramedical courses. The French Community considered that too many students from France were attending classes in Belgium and adopted the decree of June 16 2006. That decree obliged universities and schools of higher education to limit the number of students not considered as resident in Belgium who may register for the first time in one of the over-subscribed nine medical or paramedical courses. The decree limits the total number of non-resident students, for each university and for each course, to 30% of all enrolments in the preceding academic year. Once that percentage has been reached, the non-resident students are selected, with a view to their registration, by drawing lots.¹⁵³

In summary the “Court held that a member State could restrict the number of students from other member States enrolling in certain medical and paramedical courses if such a restriction was justified in order to protect public health. In so doing the Court seems to back-track a bit on its previous case law on the free movement of students.”

The restriction remains in place but as usual with Court judgements there are still many issues unresolved, which the summary article explores.

Online learning

There appear to be no policies supporting online learning.

6.3 Hungary

Hungary is a unitary state in education terms, thus meaning that any business model developed for Hungary should apply to any public university in the country. Equally usefully, the organisation of the education system shows similarities with several other Central European countries. Moreover there are 5 Hungarian-language universities outside Hungary, in Romania, Slovakia and Ukraine.

Language issues

Hungarian is the official language of Hungary.

Universities

The Hungarian higher education system has a binary divide – in other words it is a dual system, divided into colleges (that usually provide only bachelor’s degrees) and universities (that usually provide master’s degrees also).

The Hungarian Rectors Conference¹⁵⁴ includes over 60 higher education institutions. In particular there are 22 state universities and 8 private (non-state) universities.

Distance learning

There are 3 DL programmes listed.¹⁵⁵ Two are MSc programmes from the International Business School in Budapest and one is a BA Business Administration and Management from the University of Szeged. The latter is a prestigious research institution founded in Szeged in 1921 but with a history going back to 1872 (as the University of Koloszar) and even further back.¹⁵⁶

MOOCs

There appear to be no MOOCs originating from Hungary.¹⁵⁷

OER

There is little OER activity in higher education. In particular no Hungarian university is a member of the Open Education Consortium.

¹⁵³ http://ec.europa.eu/dgs/legal_service/arrets/08c073_en.pdf

¹⁵⁴ <http://www.mrk.hu> and <http://www.mrk.hu/en/members/>

¹⁵⁵ <http://www.distancelearningportal.com/countries/12/hungary.html>

¹⁵⁶ <https://www.u-szeged.hu/about-us/facts-and-figures2/brief-history-160219>

¹⁵⁷ http://www.openeducationeuropa.eu/en/european_scoreboard_moocs and <https://www.mooc-list.com/countries>

Fees and funding

The fee tabulation for public institutions in Hungary looks as follows:

<i>Full-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	free* or medium	medium
Non-EU students	medium	medium

<i>Distance</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	medium	medium
Non-EU students	medium	medium

<i>Part-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students	medium	medium
Non-EU students	N/A	N/A

* if state-funded.

For full details see Eurydice (2015), page 33, on *Hungary*. In addition to reminding readers that just “37% of students paid fees (Oct. 2014)”, it states:

- There are two basic types of financial statuses for students: state-funded and self-financed.
- Higher education institutions (HEIs) stipulate the amount of fees per semester for each programme based on costs and in accordance with a government decree providing a minimum and a maximum fee for the different levels and fields of study.
- Fees are charged to self-financing students. *State-funded places are awarded through a centralised admissions procedure to students on the basis of their academic performance with preferment to disadvantaged students and students with disabilities. In 2014, 63 % of places were state-funded.*
- The fees range from HUF 230000 [€734] to 1600000 [€5107] in the 1st cycle and from HUF 450000 [€1436] to 1900000 [€6064] in the 2nd cycle. The fees are between HUF 300000 [€958] and 2700000 [€8618] in undivided¹⁵⁸ master programmes.

The situation with grants and loans is can be summarised as follows:¹⁵⁹

- The minimum of the grant specified by the law for the disadvantaged, for students with one living parent and those under legal guardianship until the age of 18 is HUF 119000 [€380] /academic year. The minimum of the grant specified by the law for the disabled, multiple disadvantaged, orphans, students supporting dependents or those from a large family is HUF 238000 [€760] /academic year.
- In addition to the regular need-based grant ..., there is a scholarship scheme jointly financed by municipalities and higher education institutions (Bursa Hungarica scholarship)....
- Only state-funded students can receive a merit-based grant. In order to receive a merit-based grant, students have to obtain a certain number of credits or a minimum mark stipulated by the HEI.... A maximum of 50 % of students at state-funded places are awarded a merit-based grant, and the minimum amount of the grant is HUF 59500 [€190] /academic year....

¹⁵⁸ that is, all-through combined Bachelor and Master

¹⁵⁹ Eurydice (2014) page 33, bottom of page

- A government-subsidised loan (Student Loan 1) is available for both state-funded and fee-paying students (max. HUF 50000/month for a period of 10 months/year)....
Students below 40 years of age are eligible....
- A second type of student loan (Student Loan 2) has been available for fee-paying students since the academic year 2012/13. It is a government subsidised loan with interest rates lower than for Student Loan 1 (above). It can only be spent on tuition fees and can cover the whole of the tuition fee. Fee paying students can take out both types of loans to cover both study costs and living costs.
- *No tax benefits for parents or family allowances.*

The situation for international students is that in most cases they will have to pay fees, but only at the level of “self-financed” students as described above.¹⁶⁰

Online learning

There is no specific government policy support for distance learning or online learning.

6.4 Other European countries

For analysing a particular country we recommend a specific template.

1. Language issues
2. Universities
3. Distance learning
4. MOOCs
5. OER
6. Fees and funding
7. Online learning policies

Details follow on how to complete the template. The study on Hungary was done “from scratch” as a pilot using this template, rather than by updating earlier material from other projects.

Language issues

This is usually straightforward but it has to be remembered that many countries have more than one official national language and there are often recognised minority languages also which often have an effect on the universities in the country – such as in Spain or to some extent in Ireland.

Universities

We recommend as far as possible gaining information from lists of institutions provided by ministries or other official bodies, including rectors’ associations.¹⁶¹ It is important to bear in mind that many European countries now have some private universities: both non-profit foundations (perhaps religious, perhaps not) and also for-profit companies. It is also increasingly the case that providers of ISCED 4 education may also provide some university-level courses (ISCED 5 and higher). Wikipedia can be helpful, especially to find the leading and oldest institutions in a country, but is rarely up to date, especially for less-known countries.

The various “Study in Country” portals, such as STUDYinEUROPE.eu, are also very helpful.¹⁶²

Distance learning

There is a gap in information provision: in particular there are no recent authoritative studies at a detailed level on which higher education institutions in Europe deliver distance learning. However, in our experience it is rare for institutions to *stop* delivering distance learning, so that even older lists

¹⁶⁰ <http://www.studyineurope.eu/study-in-hungary/tuition-fees>

¹⁶¹ The European University Association has useful lists of institutions – <http://www.eua.be/about/members-directory?orderBy=country>

¹⁶² <http://www.studyineurope.eu>

are useful. The last authoritative study in this domain was the Re.ViCa project (Review of Virtual Campuses) during 2007-09, funded under KA3 of the Lifelong Learning Programme.¹⁶³ All publications are still available, including the comprehensive Handbook.¹⁶⁴ Equally usefully the wiki database of the institutions delivering distance learning is being maintained as long as is useful, thanks to the good offices of KU Leuven.¹⁶⁵

At the level of courses, rather than institutions, things are in good shape, thanks to StudyPortals BV and support from the European Commission.¹⁶⁶

MOOCs

A baseline figure for each country can be found from POERUP. There is more up to date information from other country reports prepared from time to time for DG EAC, IPTS and national agencies. In addition the *MOOC aggregator*¹⁶⁷ on the Open Education Europa web site has lists of MOOCs and institutions delivering them, across Europe. More informally, the MOOC List¹⁶⁸ tries to keep up with MOOCs globally.

OER

A baseline figure for each country can be found from POERUP. There is more up to date information from other country reports prepared from time to time for DG EAC, IPTS and national agencies. In particular, the ADOERUP report (Bacsich, 2015) has an Annex with reports on United Kingdom, France, Spain, and Hungary, drawn on for this report, but also Sweden, Latvia, Germany, and Romania.

Fees and funding

The template we use is shown below.

<i>Full-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students		
Non-EU students		

<i>Distance</i>	<i>Bachelors</i>	<i>Masters</i>
EU students		
Non-EU students		

<i>Part-time face-to-face</i>	<i>Bachelors</i>	<i>Masters</i>
EU students		
Non-EU students	N / A	N/A

Detailed information on fees can be found in the country pages of the Eurydice (2015) report *National Student Fee and Support Systems in European Higher Education 2015/16*. However, the country reports are often not informative on part-time and distance students, and on international students, so usually have to be supplemented by use of the various “Study in Country” sites, especially those (often American in their focus) oriented to non-EU students.

¹⁶³ <http://revica.europace.org/index.php>

¹⁶⁴ <http://revica.europace.org/Re.ViCa%20Online%20Handbook.pdf>

¹⁶⁵ <http://www.virtualschoolsandcolleges.eu/index.php/Programmes>

¹⁶⁶ <http://www.studyportals.com>

¹⁶⁷ <http://www.openeducationeuropa.eu/find/moocs>

¹⁶⁸ <https://www.mooc-list.com>

It would be easy to add an extra column for Doctoral studies but we felt it was not justifiable since the number of open education offerings in that level is very small and general documentation on doctoral fees is much less available.

As was stated earlier we did not provide tables for private institutions. This is because on the whole, fee levels for these are less uniform within countries and good information would require analysis of individual web sites. However, it should be noted that in some countries there are fee uniformities even for private providers: for example in England private providers must charge fees of at most £6000 (€6600) if they wish their EU students to be eligible for student loans, and most do that; but some do charge more than £6000, and can in fact charge more than £9000 (€9900, the public sector limit) under certain circumstances.¹⁶⁹

Online learning policies

There is no current list of policies relevant to online learning in the various European countries. Earlier information can be found from the country pages for Re.ViCa and POERUP and more up to date information from other reports prepared from time to time for DG EAC, IPTS and national agencies.

The companion report by Rivera-Velez and Thibault (2016) summarises the policy framework but only on UK, Spain, France and Italy.

¹⁶⁹ <http://www.practitioners.slc.co.uk/products/tuition-fees.aspx>

7. Lessons and caveats mainly from beyond Europe

This Chapter (of around 15 pages) looks in detail at lessons for Europe (in particular the Erasmus+ Programme countries) from beyond Europe, and also draws some caveats. There is a focus on North America (US and Canada), not surprisingly given the countries where these developments have been most active. It also includes some recent updates on key European developments in the last three months.

7.1 Transversal themes

Market focus

In the “internet years” by which we tend to judge the rapidity of internet developments, based on “dog years”,¹⁷⁰ the paradigmatic MOOC providers Coursera and Udacity (founded around 4 years ago) are around 30 internet years old. Thus in that light it is not surprising that both have undergone significant changes in approach during that period, as has happened with other internet firms. Indeed this happened with some of the open universities 40 years ago: the UK OU was originally called the “University of the Air” but even when the first courses launched, broadcast TV usage took up only a small fraction of study time and relentlessly declined as the institution matured.

*Thus Europeans should analyse what Coursera and Udacity are doing **now**, not **what they tried and failed at when they started**.*

In summary, this implies that institutions should look at an increased focus on paid-for services from students and an increased focus on services to employers not students, within a context of moves to various kinds of accreditation, be it vocational or academic.

But some would argue that this looks like a long and winding road towards low-cost accredited distance education courses. Why not jump straight to the end point? This is what was argued by two US commentators in *A Financially Viable MOOC Business Model* as long ago as February 2013, in the heyday of “disruptive innovation”, or talk about it, anyway.¹⁷¹ If one is interested in that direction, there are separate developments which venture funders are investing in, repeatedly: a good example is UniversityNow, a low-cost online HE provider based in California.¹⁷²

The wealth of institutions

The two US commentators also observed that “the institutions producing MOOCs (MIT, Stanford, Harvard, and others) have relatively healthy balance sheets, sizeable endowments, and minimal competition”.¹⁷³ While there were budget cuts on higher education in many US states during the 2010-12 depths of the last recession,¹⁷⁴ the situation in the last two years appears to have stabilised, with only the occasional blip,¹⁷⁵ usually in some long-troubled state – and in any case these cuts directly affect only the public universities.¹⁷⁶ There are separate issues in the for-profit sector (see below) and a number of small private universities are on the edge of closure,¹⁷⁷ but there are strong forces (especially state politicians and alumni) preventing the much-heralded shake-out of the “bottom-feeders” in the US higher education system¹⁷⁸ – there are 5300 HE institutions in the US.

¹⁷⁰ conventionally, 1 human year = 7 dog years, but a more sophisticated calculation uses a higher multiplier of 10.5 for the first 2 years, then reduces to 4 from then on – <http://www.onlineconversion.com/dogyears.htm>

¹⁷¹ by Ramin Sedehi and Damian Saccocio, *University Business*, Feb 2013 – <http://www.universitybusiness.com/MOOCBusinessModel>

¹⁷² <http://unow.com>

¹⁷³ see *A Financially Viable MOOC Business Model*

¹⁷⁴ http://www.huffingtonpost.com/robert-l-carey/reversing-the-trend-of-sl_b_3880870.html

¹⁷⁵ http://www.huffingtonpost.com/the-conversation-us/what-berkeleys-budget-cut_b_9349412.html

¹⁷⁶ <http://www.theatlantic.com/business/archive/2015/10/are-public-universities-going-to-disappear/411685/>

¹⁷⁷ <http://www.reuters.com/article/us-usa-virginia-sweetbriar-idUSKCN0PC2SR20150702>

¹⁷⁸ https://www.washingtonpost.com/news/grade-point/wp/2015/06/22/loyal-alumni-make-it-extremely-difficult-to-close-a-college-just-ask-sweet-briar/?tid=a_inl

One cannot make a simplistic comparison between the wealth of the US HE system and the poverty of the European one: again the picture is patchy. A few countries, such as France, have made considerable recent investments in their HE systems; others, like the UK at least in England, have managed their funding problems by moving the burden from the state to the students, finessing it via a loan system and, for students in richer families, additional support from parents. It is not then necessarily a coincidence that these two countries are among the leaders in MOOCs.

These two countries are not the only exceptions: an EU report in March 2013 concluded that although in eight Member States, investment in education fell, in others it rose – a bit.¹⁷⁹ In detail:

Cuts of more than 5% were imposed in Greece, Hungary, Italy, Lithuania and Portugal, while Estonia, Poland, Spain and the UK (Scotland) saw decreases of 1 to 5%. *However, five Member States increased education spending by more than 1%: Austria, Denmark, Luxembourg, Malta and Sweden, as well as the German speaking area of Belgium.*

Interestingly Germany and Netherland did not provide data to the study – but it is well known that there were substantial HE budget cuts in 2012 in the Netherlands¹⁸⁰ including cuts to activities at OUNL.

Again, and relevantly, while it is certainly the case that universities in England feel relatively wealthy at this time, thanks to the recent rise in tuition fees,¹⁸¹ and thus are likely to have more money for “adventures”, this situation is not expected to continue. While not every university accepts the gloomy forecast of a “‘worst-case’ £4.4bn budget deficit” made by the Funding Council in November 2015,¹⁸² a combination of factors, rather than further large targeted government cuts, are making universities in England anxious – and anxious universities tend to become more risk-averse.

Nor should it be assumed that all Member State government budget cuts targeted on universities have worked through; Finland¹⁸³ and Denmark¹⁸⁴ are dealing with these issues now.

The quality constraints

It is a commonplace in some circles to contrast the European dirigiste approach to quality, accreditation and regulation of universities with the free and easy approach of the US to such matters. Again, the picture is much more nuanced.

First, both Europe and North America (along with Australasia) are nowadays¹⁸⁵ mercifully free of the restrictions on distance education imposed by some governments in Latin America and Asia – better-known examples including Brazil over many years,¹⁸⁶ the Middle East (one of the reasons why the Arab OU offered a study-centre-based blended programme) and India.¹⁸⁷ In addition, there are often specific distance learning quality regulations in many Asian countries.¹⁸⁸

¹⁷⁹ http://ec.europa.eu/education/news/2013/20130321_en.htm

¹⁸⁰ <http://www.universityworldnews.com/article.php?story=20121102134738222>

¹⁸¹ Tuition fees give England universities surplus worth £1.8bn –

<http://www.theguardian.com/education/2016/mar/03/tuition-fees-england-universities-surplus-balance>

¹⁸² <https://www.timeshighereducation.com/news/hefce-chief-warns-of-worst-case-budget-deficit-for-universities>

¹⁸³ <http://monitor.icef.com/2015/06/finnish-universities-facing-big-budget-cuts-fees-for-non-eu-students-back-on-the-table/>

¹⁸⁴ <http://cphpost.dk/news/danish-government-to-cut-billions-from-education.html>

¹⁸⁵ some might be alarmed to read that in the US in 2007 there were restrictions –

[http://www.wikinest.com/stock/Career_Education_\(CECO\)/Restrictions_Distance_Education_Programs](http://www.wikinest.com/stock/Career_Education_(CECO)/Restrictions_Distance_Education_Programs)

¹⁸⁶ see <http://www.irrodl.org/index.php/irrodl/article/view/65/133> written in 2002 – but apparently easing by 2012 – <http://edutechdebate.org/open-and-distance-learning/open-educational-resources-and-distance-learning-in-brazil/>

¹⁸⁷ <http://www.thehindu.com/news/cities/chennai/varsities-upset-over-ugc-notice-on-distance-education-programmes/article7532564.ece>

¹⁸⁸ *Quality Assurance in Distance Education and E-learning: Challenges and Solutions from Asia* –

<http://www.sagepub.in/books/Book240611?subject=C00&imprint=%22SAGE%20India%22&sortBy=defaultPubDate%20desc&fs=1>

That is not to say that there are no reputational issues in Europe with distance learning (there are, especially in some Member States) or no financial distortions – several fee/loan/grant schemes discriminate against part-time face-to-face and distance learning students.

United States

The structure of US quality/accreditation is not that different from that in Europe. The US is divided into six geographic regions (groups of US states), in which operate seven Regional Accreditation Commissions.¹⁸⁹ An overview document describes a process familiar to a European audience:¹⁹⁰

Accreditation is a self-regulatory, peer review process based on rigorous standards. Colleges and universities are judged based on self-evaluations analyzing how well they meet these standards, in light of their mission. Following a review by a team of peers, accrediting commissions determine the accreditation status of the institution and use a variety of means to ensure follow-up as appropriate and further evaluation in the case of substantive change on the part of the institution.

The New England Association of Schools and Colleges, Commission on Institutions of Higher Education (NEASC) is one such body.¹⁹¹ Its current nine Standards, to come into force in July 2016, have a familiar feel, focussing on the broad areas of:

1. Mission and Purposes
2. Planning and Evaluation
3. Organization and Governance
4. The Academic Program
5. Students
6. Teaching, Learning, and Scholarship
7. Institutional Resources
8. Educational Effectiveness
9. Integrity, Transparency, and Public Disclosure.

This might all seem a comforting routine without any teeth, and it is fair to say that many US institutions, especially the more prestigious ones, have not had much difficulty in retaining accreditation, though the effort involved can be substantial. There have also been criticisms of a “too cosy” relationship of Commissions with universities, even with for-profit ones like Corinthian Colleges.¹⁹² But less well known is that several private for-profit universities have had substantial problems with accreditation and the Regional Accreditation Commissions demonstrated that they have real power. This is in part because students at an unaccredited institution cannot access the student loan scheme and so standing behind the Commissions is the US Department of Education – interestingly with no jurisdiction in the individual states but with crucial jurisdiction over the federal student loan scheme.

Perhaps the best known example to analysts is Altius Education but several more could also be given if space had permitted. Altius Education was an innovative software company which developed a “next generation” Learning Management System and student support model.¹⁹³ They partnered with a traditional small private university, Tiffin University,¹⁹⁴ to set up Ivy Bridge College, a new online HE provider. However, the Higher Learning Commission refused to accredit it and forced the shut-down

¹⁸⁹ <https://cihe.neasc.org/about-accreditation/regional-accrediting-commissions>

¹⁹⁰ <https://cihe.neasc.org/about-accreditation/us-regional-accreditation-overview>

¹⁹¹ <https://cihe.neasc.org>

¹⁹² How For-Profit Colleges Stay In Business Despite Terrible Track Record – http://www.huffingtonpost.com/2013/09/19/for-profit-college-accreditation_n_3937079.html

¹⁹³ <https://net.educause.edu/ir/library/pdf/NG1221.pdf>

¹⁹⁴ <http://www.tiffin.edu>

of Ivy Bridge College, with the transfer of its students to other institutions, and the downsizing of Altius.¹⁹⁵ Soon afterwards the remaining Altius assets were sold to Datamark, an enrolment marketing company.¹⁹⁶

It does not seem to be the case that any of the MOOC providers have yet fallen foul of the Regional Accrediting Commissions, but by keeping clear, so far, of formal academic accreditation and of student loans, they do not come “under the spotlight”. Difficulties are likely in the near future: a recent paper on quality of MOOCs established that several MOOCs did not score well against the well-respected *Quality Matters* criteria.¹⁹⁷

On the whole, this kind of pressure from regulatory bodies on online providers is not one that we see in Europe, though there have been a number of episodes of quality concerns regarding private institutions, such as in Portugal.¹⁹⁸ Often (as in Portugal) these predated the development of effective ENQA-accredited national quality agencies; in this light it is interesting that the issue seems topical currently in Macedonia¹⁹⁹ – the article cited is also a good overview of the situation in other European countries.

There have been similar quality issues with private universities in non-European countries, such as Malaysia a few years ago.²⁰⁰

Canada

By European standards, or even by the standards of the US, Canada still has a very “light touch” system of quality assurance. To begin with, Canada’s approach to federalism means that there is almost no role in education for the national government, so much so that, in contrast to almost every other country in the world there is no national Minister of Education: instead there is a Council of Ministers of Education from the provinces that provide guidance.²⁰¹ However, this, coupled with the fact that some provinces are very small, means that progress on most issues is very slow.

Over 10 years ago, as private for-profit institutions began to be active, the issues around a lack of a clear Canadian approach to accreditation and quality were flagged by the President of an innovative university college in an influential report,²⁰² reflecting on international credibility of Canadian higher education in the light of international competition for students and emerging problems with a few less well behaved institutions. In 2007 the Council of Ministers of Education issued a *Ministerial Statement on Quality Assurance of Degree Education in Canada* which set up a federal framework, following an accepted pattern elsewhere, but naturally left specifics to the provinces.²⁰³

Later some of the larger provinces updated their own quality procedures, usually instantiating them in agencies of a type not unfamiliar to a European audience, such as the Campus Alberta Quality Council²⁰⁴ or the Degree Quality Assessment Board in British Columbia.²⁰⁵ And from time to time

¹⁹⁵ <http://www.xconomy.com/san-francisco/2013/09/10/altius-education-changes-course-accreditation-battles/>

¹⁹⁶ <http://www.helixeducation.com/news/datamark-acquires-technology-assets-and-support-infrastructure-from-altius-education/>

¹⁹⁷ In Search of Quality: Using Quality Matters to Analyze the Quality of Massive, Open, Online Courses (MOOCs), 2015 – <http://www.irrodl.org/index.php/irrodl/article/view/2348/3411>

¹⁹⁸ The rise and fall of the private sector in Portuguese higher education, 2000 – <http://www.csd.uoc.gr/~tziritas/16/Portugal.pdf>

¹⁹⁹ COMPETITION BETWEEN PUBLIC AND PRIVATE UNIVERSITIES: INTERNATIONAL EXPERIENCES AND CASE OF MACEDONIA, 2013 – http://www.wjeis.org/FileUpload/ds217232/File/26_a_abdulla_azizi_zemri_elezi_arben_mazreku.pdf

²⁰⁰ Malaysia: Many private colleges have quality issues – <http://www.universityworldnews.com/article.php?story=20111112205637185>

²⁰¹ <http://www.cmec.ca/en/>

²⁰² *Degree Accreditation in Canada*, by Dave Marshall, President of Mount Royal College, 2004 – <http://www.mtroyal.ca/cs/groups/public/documents/pdf/degreeaccredincanada.pdf>

²⁰³ <http://www.cicic.ca/docs/cmec/QA-Statement-2007.en.pdf>

²⁰⁴ <http://www.cagc.gov.ab.ca/about-the-council.aspx>

some institutions have been closed²⁰⁶ by provincial governments, such as in British Columbia, or merged into or with other institutions.²⁰⁷ Thus the “gradualist” appearance of Canadian higher education is not quite the reality.

Regulation of vocational education

Europe is different from the US again in that most European countries have a quality and regulatory framework for vocational education (ISCED 4) – and to complicate matters, with a few exceptions it is run by different agencies with different rules from those for higher education, which are on the whole even less sympathetic to online learning. Thus classifying MOOCs “officially” as ISCED 4 probably would *increase* the regulatory problems in Europe, not reduce them. The ADOERUP report goes into the sensitive area of progress, or lack of it, in regulation of VET in Europe.

The remit of a university

In the US and Canada, universities (with rare exceptions) act as if they are self-accrediting and plenipotentiary: in other words, they do what they want to do – and it is only rarely (very rarely if they are prestigious) that there are any complaints. Compared with European countries, the voice of students is muted. It was particularly interesting that despite the high fees students pay to attend Harvard and MIT, students took some years to become concerned that so much money was being spent on developments of no clear use to them – though MIT eventually realised the problem as they pivoted in 2014 to a stronger internal on-campus justification of their open courses.

In Europe, in many countries universities have not yet escaped from tight control by ministries. There are still some countries such as France where university academic staff are in fact civil servants.²⁰⁸ In some other countries such as Finland, the move to legal incorporation of universities was not popular with academic staff, no doubt in part (but not totally) because it took place shortly before major mergers of institutions.²⁰⁹

Especially in the eastern countries of the EU, government control of universities is still strong – though all across Europe there are moves to greater university autonomy. Still, in almost all EU countries, the fee levels and the numbers of students on programmes are closely controlled. For the public sector universities, with some rare exceptions such as England, the majority of their funding comes from the state. To us this seems to make it hard for universities to decide to undertake major activity in new directions, such as MOOCs. As the ADOERUP report put it, “The Humboldtian idea of the ‘union of teaching and research’ (Anderson, 2010)²¹⁰ would not seem to leave room in its pure form for a social mission to the world.” (Bacsich, 2014, page 36). Furthermore the sentence before that quote notes, “Since many European PSE [post-secondary education] providers are now short of funds (EUA, 2011),²¹¹ it would be a foolhardy institution that spent money on activities that were not deemed ‘necessary’.”

Nevertheless, there are still elements of scale and flexibility in university budgets that schools and post-secondary VET providers (ISCED 4) envy – so that pilots are possible. But this provides a barrier

²⁰⁵ <http://www.aved.gov.bc.ca/degree-authorization/>

²⁰⁶ <http://www.aved.gov.bc.ca/degree-authorization/students/institutions-closed-lansbridge.htm>

²⁰⁷ TechBC and BCOU – see <https://www.sfu.ca/aq/issues/november2002/features/sfu-surrey.html> and <http://www.thecanadianencyclopedia.ca/en/article/thompson-rivers-university-open-learning/> respectively

²⁰⁸

<http://www.eui.eu/ProgrammesAndFellowships/AcademicCareersObservatory/AcademicCareersbyCountry/France.aspx>

²⁰⁹ Frozen ambitions (Finland moves to merge its smaller universities), April 2012 –

<https://www.insidehighered.com/news/2012/04/19/finland-moves-merge-smaller-universities>

²¹⁰ The ‘Idea of a University’ today, by Professor Robert Anderson, *History & Policy*, 2010 –

<http://www.historyandpolicy.org/policy-papers/papers/the-idea-of-a-university-today>

²¹¹ *Impact of the economic crisis on European universities*, January 2011, European University Association,

http://www.eua.be/Libraries/Newsletter/Economic_monitoringJanuary2011final.sflb.ashx

to scaling up – as soon as expenditure (or income or risk) reaches a certain level,²¹² senior management will get nervous if the developed is not “authorised” – and there will be no “second stage ignition”.²¹³

The Foundations

The other key difference between Europe and the US is the role of the charitable foundations. It is unlikely that the OER movement would have reached any sizable scale without the pioneering efforts of the *Hewlett Foundation* (whose full name is *The William and Flora Hewlett Foundation*). Since 2001 it “has made grants in excess of \$40 million to support institutions and organizations that develop and provide online access to open educational content”, including to MIT (OpenCourseWare), Carnegie Mellon and around 50 other initiatives.²¹⁴ Hewlett is one of a number of US foundations who collectively provide substantial support to education initiatives. While Europe has some foundations with interest in education, of which the Bertelsmann Foundation²¹⁵ is best known internationally, few have a focus on online and open higher education.

Of course both US and Europe have federal²¹⁶ and transnational support schemes respectively, and there are some national support schemes in Member States but the specific focus and mission of US foundations was crucial.

In this context we should also mention the *Educational Quality through Innovative Partnerships* programme (EQUIP)²¹⁷ funded by the US Department of Education. This is merely the last of a series of major programmes relevant to open and online education funded by this massive Department, which often seem ignored by European commentators.

7.2 Recent pivots in strategy of MOOC suppliers (mainly from US)

Background in distance learning and MOOC acceptance

A very useful background document for US developments is the latest (and final) report (Allen and Seaman, 2016) in the series of 13 annual surveys of online education in the United States carried out by the Babson Survey Research Group. Intriguingly the justification for making this report the last one is itself interesting: “When more than one-quarter of higher education students [in the US] are taking a course online, distance education is clearly mainstream.” (page 3)

Europe still has some way to go....

The report, released in February 2016, makes the following key points on numbers of students in distance education, which we have reordered to suit our purposes.

Background: This report series measures the trend of distance education enrollments continually increasing at rates far in excess of those of overall higher education.

The evidence: Distance education enrollments continue to grow, even in the face of declining overall higher education enrollments.

²¹² considerations from Activity Based Costing theory place this at around 1% of total budget; experience in the UK puts this at around 1000 students – for more on this see

https://www.academia.edu/13123422/Organisational_Change_in_UK_education_induced_by_ICT_-_First_Report

²¹³ <https://ictenhancedlearningandteaching.wordpress.com/2012/04/11/analytic-or-operational-necessity-towards-the-multiversity/>

²¹⁴ <http://www.hewlett.org/uploads/files/OpenEducationalResourceInitiative.pdf>

²¹⁵ <https://www.bertelsmann-stiftung.de/en/home/>

²¹⁶ such as FIPSE (Fund for the Improvement of Postsecondary Education) run by the US Department of Education – <http://www2.ed.gov/about/offices/list/ope/fipse/index.html>

²¹⁷ <http://www.ed.gov/news/press-releases/fact-sheet-department-education-launches-educational-quality-through-innovative-partnerships-equip-experiment-provide-low-income-students-access-new-models-education-and-training>

- The total of 5.8 million fall [autumn] 2014 distance education students is composed of 2.85 million taking all of their courses at a distance and 2.97 million taking some, but not all, courses at a distance.
- The observed growth rate from 2013 to 2014 of the number of students taking at least one distance course was 3.9%, up from the 3.7% rate for the previous year.
- Public institutions command the largest portion of distance education students, with 72.7% of undergraduate and 38.7% of graduate-level distance students.
- For the second year in a row the rate of growth in distance enrollments was very uneven; Private not-for-profit institutions grew by 11.3% while private for-profit institutions saw their distance enrollments drop by 2.8%.
- The number of students *not* taking any distance education courses continues to drop, down 434,236 from 2012 to 2013 and a further 390,815 from 2013 to 2014.

Their results on MOOCs confirm informal conversations and some earlier reports (such as Jansen and Schuwer, 2015) – stating (page 6) that (with our italics but their bold):

Background: Reports from the last three years noted that only a small number of institutions either had or were planning a Massive Open Online Course (MOOC).

The evidence: The results for 2015 are very similar to previous years — a small segment of higher education institutions are experimenting with or planning MOOCs. *Most institutions have decided against a MOOC, or remain undecided.*

- The percent of higher education institutions that currently have a MOOC increased from 2.6% in 2012 to 5.0% in 2013, to 8.0% in 2014, and now stands at 11.3%.
- Many institutions (27.8%) report they are still undecided about MOOCs, while the single largest group (58.7%) say they have no plans for a MOOC.

European readers should not go away with the impression that all is well in the US world of online learning. In particular, “The proportion of academic leaders who report that online learning is critical to their institution’s long-term strategy has shown the largest-ever one-year decline”. Furthermore, “Only 29.1% of chief academic officers believe their faculty accept the value and legitimacy of online education. This rate is lower than the rate recorded in 2004.”

The whole report is just 58 pages and the core of the report just 39. We commend it in full to all our readers interested in the latest US developments.

Recent pivots from MOOC aggregators

We have found a small number of opinion articles very useful in compiling this section on pivots. We particularly want to recommend Chafkin (2013), Cook (2016), Craig (2016), Morrison (2016), Shah (2016), Straumsheim (2016), and Szpiro (2016). There is much more in each article than we have been able to draw on in this section.

Elements of an online module

This section will make more sense if prefaced by a short summary of the key components of an online module and their impact on the total human cost of provision for the provider. The taxonomy is based on traditional practice in online education in US and UK since the mid 1990s but it is typical of most online offerings, though some offerings leave out a few components. It does make an assumption that the course runs as a cohort to a timescale (as most MOOCs do) rather than individual learners starting when they wish and taking as long as they wish.

1. Content – usually a one-off purchase or development cost (in an ideal world free)
2. Student-student collaboration (usually by asynchronous forums)

3. Tutoring/mentoring of students individually or in groups: typically costed by assigning one tutor per n students, where $n = 20$ in some institutions
4. Automated formative assessment (quizzes, ideally with hints and feedback) during the module
5. Automated summative assessment (i.e. marks go towards module grades) during the module or at end of module
6. Student-graded summative assessment during the module
7. Tutor-graded summative assessment, with feedback during the module, but no feedback at end of module (final exam, term paper, or dissertation)
8. Professional or industry certification of final grades
9. Academic certification of final grades with mapping into credits (ECTS in Europe).

It is clear that with all these features present the cost of the course is mainly proportional to the number of students on it as this determines the number of human beings (tutors) needed to service the course. A small element should be added to cover the costs of computing and storage, and any licenses for software used, but this is much less than the human tutor cost.

It should also be clear that doing without tutors saves the provider a lot of money if there are a lot of students on the course. Hence the obsessional interest in Artificial Intelligence.

It might not be quite so clear that professional/industry or academic certification adds a significant one-off cost – but there are additional quality and recognition procedures that must be undertaken. Again, further additional effort is required once a loan scheme and/or financial aid scheme is introduced, as Coursera has now.

Udacity

Less than a year after 2012, the so-called *Year of the MOOC*,²¹⁸ the pivots began. First off the mark was **Udacity** in late 2013. Faced with low completion rates and rapidly using up most of its initial venture funding of \$20 million,²¹⁹ Udacity announced that it would “offer technical training courses from corporate partners such as Google, Salesforce.com, Autodesk, and Nvidia”. This was reported on many blogs including the Open Education Europa portal,²²⁰ based on US sources including the “long read” by Chafkin (2013). Crucially, “While the courses will offer accreditation, they will not be free”.

There were critics from the purist end of the MOOC movement. One Canadian expert said:²²¹

This is not a failure of open education, learning at scale, online learning, or MOOCs. Thrun tied his fate too early to VC funding. As a result, Udacity is now driven by revenue pursuits, not innovation. He promised us a bright future of open learning. *He delivered to us something along the lines of a 1990's corporate elearning program.*

Udacity had certainly over-promised²²² – but the need for revenue, so disparaged by a Canadian critic perhaps overly confident of the continuing dominance of public funding for universities as in his country, is not just a US need. We shall see that by 2016 that the last sentence was seen by all the MOOC aggregators as indicating a key road to follow (even if not the only one).

²¹⁸ http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?_r=0

²¹⁹ <https://www.crunchbase.com/organization/udacity#/entity>

²²⁰ <http://www.openeducationeuropa.eu/en/news/faced-low-completion-rates-moocs-udacity-shifts-focus-corporate-training>, 27 November 2013

²²¹ The Failure of Udacity, by George Siemens. Elearnspace blog, 15 November 2013 – <http://www.elearnspace.org/blog/2013/11/15/the-failure-of-udacity/>

²²² One venture funder commented to me “Poor Sebastian – he’s burnt \$18 million and turned himself into a training company”. But then it turned out that being a training company was a smart idea.

For Udacity it worked. They generated sufficient investor confidence to raise \$140 million in two further rounds,²²³ including from companies like Bertelsmann (the European publisher), cautious by nature, but well used to investments in online learning, by then including Synergis Education, HotChalk and WizIQ.²²⁴ This, especially their new rhetoric of “nanodegrees” (industry-relevant training certificates)²²⁵ generated talk about Udacity being the “first MOOC unicorn”.²²⁶

It is easy to understand why many mainstream people in the MOOC community, including at some of the other aggregators, felt that Udacity had “gone off-piste”, “turned to the dark side”,²²⁷ or in the words of our poem, rushed down “the braid braid road” of “wickedness”, which “some [like venture funders] call the road to heaven”.

So perhaps that view, and an increasing deafness to the barrage of hype which was very much Udacity’s ongoing marketing style, meant that the pivot did not receive much attention – not publicly, at least. That was certainly the view I got when in Stanford in summer 2015 at the Future Learning 2020 Summit.²²⁸ People accepted that there was now a big role for MOOCs in corporate training and a number of paradigmatic presentations were given, including on the Microsoft MOOC involving INSEAD,²²⁹ but most still felt strongly that there were university purposes and strong social mission reasons (NGOs etc) for the deployment of MOOCs within the “free” paradigm (even if most had sold out on “open” some time before).

Coursera

Coursera had been taking a different tack, following a sensible road that in fact several open universities had already taken in moving from a modules approach to programmes – and in fact following the lead of edX which started the pattern in September 2013 with Xseries.²³⁰ In January 2014 Coursera announced 10 “Specializations”, grouping courses together into programmes allowing students to develop mastery in specific fields.²³¹ Various useful partnerships were announced in 2014 and two further funding rounds in 2015²³² so perhaps at the time Coursera did not feel under strong financial pressure. Indeed in January 2015 Coursera had stated in an interview that “Verified Certificates for both courses and specializations [are] the primary revenue source for us. This has worked out really well because the number of course completers who are opting to earn a Verified Certificate has climbed steadily from less than 10% to roughly 20% or 25%”.²³³

But new years bring new challenges and in January 2016 Coursera confirmed²³⁴ an earlier warning²³⁵ that with immediate effect in 2016 fees would be introduced for “certain courses”. Actually it stated “Most courses that are part of Specializations will begin offering this new experience this week”, but only “if you’d like to submit required graded assignments and earn a Course Certificate”.

²²³ <https://www.crunchbase.com/organization/udacity#/entity>

²²⁴ <https://www.crunchbase.com/organization/bertelsmann/investments>

²²⁵ <https://www.udacity.com/nanodegree>

²²⁶ <http://fortune.com/2015/11/11/udacity-funding/>

²²⁷ skiing and Star Wars phrases respectively

²²⁸ <https://www.class-central.com/report/future-learning-2020-summit-2015/>

²²⁹ as above – see the text on Microsoft

²³⁰ <http://news.mit.edu/2013/mitx-introduces-xseries-course-sequence-certificates-on-edx>

²³¹ Coursera Specializations: Focused Programs in Popular Fields, Coursera blog, 20 January 2014 – <http://knowledge.wharton.upenn.edu/article/moocs-making-progress-hype-died/>
<http://coursera.tumblr.com/post/137649201147/an-update-on-enrollment-and-grading-options-on>
<http://coursera.tumblr.com/post/73994272513/coursera-specializations-focused-programs-in>

²³² August and October – <https://www.crunchbase.com/organization/coursera/funding-rounds>

²³³ The Hype is Dead, but MOOCs Are Marching On, Wharton blog, 5 January 2015 –

²³⁴ An update on enrollment and grading options on Coursera, Coursera blog, 19 January 2016 – <https://blog.coursera.org/post/131756940057/courseras-financial-aid-what-it-is-and-who-is>

²³⁵ Verified Certificates ensure academic integrity, Coursera blog, 7 November 2015 –

Wisely, it coupled this announcement with a link to its financial aid package, which it had updated and clarified a few months earlier.²³⁶

Already in December 2015 edX had discontinued Certificates for all its learners.²³⁷ So by early 2016 all three main US MOOC providers had effectively discontinued free certificates.

Coursera is looked up to as the “commercial but ethical and pedagogically-aware” MOOC provider and so the change to making students pay for graded assignments “wasn’t well received; with a number of commentators complaining about the change on Coursera’s blog; the feedback loop of assignments is an important part of what makes a MOOC different from OpenCourseWare”.²³⁸

One commentator, who had developed a “no-pay MBA” approach²³⁹ round MOOCs wrote an impassioned letter *Dear Coursera, your new revenue model isn’t working for us*.²⁴⁰ In it he makes some useful suggestions as to how Coursera could earn money instead of charging for assessment. These include:

- Paid-for mentoring²⁴¹
- Paid-for assignments graded by experts (not computers or other students)
- Industry connections and job placement.

The last is interesting because Coursera is already working with LinkedIn but we suspect the writer was thinking about something more directed than what Coursera currently does.²⁴² The first two are interesting because almost any online or distance university would recognise these two roles as key aspects of the role of “tutor”.

If Coursera adopted these changes it would bring it even closer to the university model, since in many countries of Europe career advice and job placement are seen as vital services for universities to provide for their students, given the current high levels of youth unemployment in many Member States.

We suspect that Coursera will consider these suggestions and *add them* to the list of paid services it offers, rather than draw back from its current decisions.

Carl Straumsheim (2016) has written a thoughtful article “The limits of open” on these issues, which we commend to readers. In it he quotes the education writer Audrey Watters, who called the shift “significant,” but also “inevitable”. He goes on to say about her:

In an email, she pointed out that Coursera has needed to develop a business model that satisfies its investors -- “although I’m not fully convinced that this move will be it,” she added.

Watters also said it is “striking” how strongly MOOC providers have believed their certificates would become recognized credentials, either for educational or work-related purposes.

We think it is interesting that Audrey Watters feels that there is at least one further pivot to come, for Coursera at least.

In our poem, the Queen may clearly see the “road to fair Elfland” but how many others can?

²³⁶ Coursera’s Financial Aid: What it is and who is benefiting, Coursera blog, 23 October 2015 – <https://blog.coursera.org/post/102036391812/verified-certificates-ensure-academic-integrity>

²³⁷ <http://blog.edx.org/news-about-edx-certificates?track=blog>

²³⁸ <https://www.class-central.com/report/coursera-paywall-edx-discontinues-free-certificates/>

²³⁹ <https://www.nopaymba.com>

²⁴⁰ 22 March 2016 – <https://www.nopaymba.com/open-letter-coursera/>

²⁴¹ <https://www.class-central.com/report/coursera-mentor-guided-courses/>

²⁴² <http://coursera.tumblr.com/post/66959529107/add-coursera-accomplishments-to-your-linkedin>

Debbie Morrison (2016) in her must-read article on MOOC business models in 2016 provides a detailed analysis of Coursera's announcements. She takes the view that Coursera still has more than one revenue-generating strategy and takes a comparative approach to Coursera, edX, Udacity and iversity (see below for iversity). Her key insight is:

Offering free, high-quality content on feature-rich digital platforms is not free for the MOOC provider or the partnering institutions. Even though free appeared to be the end-goal of MOOCs at the time of their launch in 2012. But free is not sustainable. The concept of MOOCs is shifting to where the demand is – fee-based certificate courses and programs in skill-specific areas, and corporate learning.

Our view is that it is an insoluble problem of capitalism that companies need funds and *paying* customers. Which does leave thinkers with the eternal dilemma: when the public sector institutions *won't innovate* and companies *can't innovate* and governments *have run out of money*, what is society to do?

University income from MOOC aggregators

Public information is fragmentary and seems to be only from US institutions.

- “Johns Hopkins University made at least \$3.5 million in less than a year from the sale of verified certificates for its Data Science Specialization”²⁴³
- “HarvardX has more than three million enrollments on edX — the most enrollments out of all universities on edX. Yet its revenue to date from id-verified certificates amount to only \$435,000. More than 80% of the HarvardX courses offer verified certificates.”²⁴⁴

Accreditation in the US

There are an increasing number of universities in the US offering “MOOC-based degrees”, either at undergraduate or postgraduate level (Bachelor or Masters). **MOOCs University**, which “partners with accredited higher education institutions worldwide to create ‘MOOCs to Academic Certification and Degree’ pathways opportunities for the serious MOOC learner”,²⁴⁵ lists the following:²⁴⁶

1. Arizona State University & edX MOOC Platform: Global Freshman Academy²⁴⁷
2. Georgia Tech College of Computing, in collaboration with AT&T and Udacity: Online Masters of Science in Computer Science²⁴⁸
3. University of Illinois at Urbana-Champaign, in partnership with Coursera: Online MBA (iMBA)²⁴⁹
4. University of Illinois at Urbana-Champaign: Online Masters of Computer Science in Data Science (MCS-DS)²⁵⁰
5. The Texas State University System: MOOCs-based “Freshman Year for Free” Program²⁵¹

There are undoubtedly more – in particular the “Freshman Year for Free” Program is designed by a collaborative of universities, the Modern States Education Alliance.²⁵²

Common principles are that the programmes are accredited and that the cost of each programme is a fraction of the cost of an apparently similar non-MOOC offering.

²⁴³ <https://www.class-central.com/report/mooc-business-model/>

²⁴⁴ <https://www.class-central.com/report/coursera-paywall-edx-discontinues-free-certificates/>

²⁴⁵ <http://www.moocsuniversity.org/moocs-university-press.html>

²⁴⁶ <http://www.moocsuniversity.org/mooc-based-degrees.html>

²⁴⁷ <https://www.edx.org/gfa>

²⁴⁸ <http://www.omscs.gatech.edu>

²⁴⁹ <https://www.coursera.org/university-programs/imba/>

²⁵⁰ <https://cs.illinois.edu/news/mooc-based-ms-data-science>

²⁵¹ <https://www.texastribune.org/2015/09/10/free-freshman-year-texas-state-will-try-it-out/>

²⁵² <http://modernstates.org>

There are also an increasing number of vocational certificates being offered by Udacity, Coursera, edX etc. Finally there are the beginnings of moves to have credit values (in US terms – ECTS in European terms) assigned to some of these.

Ryan Craig (2016) argues²⁵³ that “degree exceptionalism will abate and degrees – starting with master’s, but continuing with bachelor’s – will be one credential among many”, which he calls “microdegrees”. Moreover:

They’ll be on a leveling playing field with a plethora of novel credentials offered in blended and online modalities by colleges, universities, new postsecondary providers, bootcamps, not-for-profit organizations, museums, libraries, enterprises and solo practitioners seeking to disintermediate all of the above.

From his own experience with for-profit higher education in the US he is well aware of the role of quality assurance in the accreditation of programmes and institutions. He suggests that the “current patchwork of regional and national accreditation could expand or evolve to encompass microdegrees.” Interestingly he records that “early microdegree providers seem to prefer to steer clear of the entire accreditation/Title IV ecosystem”. (Note to non-US readers: Title IV is the US student loan system.²⁵⁴ Some low-cost providers, such as UniversityNow,²⁵⁵ do steer clear of it since the administrative burden on providers is considerable. It actually affects non-US universities²⁵⁶ too.) However, opting out of Title IV is permissible – opting out of accreditation and quality is not.

Daniel Szpiro (2016) in a suspiciously similarly timed intervention, argues for a continuing role for the accredited public providers and suggests an increased role for them in non-degree provision. He argues that they have five advantages (the first four are summarised from much longer descriptions by him), noting our italics:

1. MOOC aggregators (Coursera etc) are not universities: on the whole the subject knowledge comes from staff at universities.
2. Most techno-pedagogic expertise in this domain also comes from staff at universities.
3. They are not competitors to face-to-face provision in traditional universities.
4. Even for non-degree and non-credit courses, traditional universities still enjoy a competitive advantage with respect to recognition and credibility.
5. “Successful traditional universities and colleges have an existing tuition base from on-ground courses that provides a financial foundation upon which to experiment and build technology-facilitated offerings. *In contrast, while they have received significant coverage in the press, service providers like Udacity, Udemy, and Coursera are still struggling to finesse a sustainable business model from the MOOC origins.*”

As readers can see, most of the points are contestable and parameters also differ between countries. In many European countries, elite universities show little interest in non-degree provision or even in a wide range of vocational degrees (beyond the usual suspects of nursing, accountancy etc) or short-cycle (ISCED 5) programmes. This would make a fascinating debate at a workshop. However, on recognition he makes a telling point, often forgotten by enthusiasts for badges:

For a non-academic organization to offer a credential like a certificate of completion is simple but potentially meaningless. We typically pay respect to credentials that are earned through some form of assessment and verification. *It is not clear that a “microcredential” or “nanodegree” offered by a service provider will carry any more weight on a resume than a list of books you read on your summer vacation without any form of credible assessment to verify any learning that took place.*

²⁵³ in an article dated 31 March 2016, the final day on which we took input for this Report

²⁵⁴ <https://studentaid.ed.gov/sa/about/data-center/student/title-iv>

²⁵⁵ <https://www.insidehighered.com/news/2013/10/08/universitynow-unique-approach-accreditation-and-federal-financial-aid>

²⁵⁶ <http://www.ed.ac.uk/student-funding/financial-support/student-loans/usa/policy>

However, his criticism also points to a way that non-traditional providers can fix the problem – effective assessment. And so we get back to recent Coursera decisions.

Finally he points out that accreditation has legal aspects.

On a related note, I can imagine a legal challenge for any non-accredited, non-academic organization claiming it will grant a “nanodegree” for the completion of a course. Clearly that organization would face a legal challenge if it were to claim it granted a “degree” so the prefix “nano” does not change that.

As we showed earlier there are a number of US situations where institutions have been closed because government or accrediting bodies were not satisfied with their procedures. It may be that in the US once a university is accredited it can run any programme it wishes in any way it wishes. But in those countries where programmes are accredited as well as institutions, a badly-delivered programme could be a reputational or quality disaster for the whole institution.

Meanwhile in Europe

FutureLearn

Judged by current US MOOC commercial practice in early 2016, the business model in FutureLearn might be thought by some as somewhat behind the curve. FutureLearn is a clear success in terms of numbers (they quote over 3 million learners, including over 25% without degrees).²⁵⁷ In late 2015 the UK Open University put a further substantial sum into its funding²⁵⁸ – but a careful perusal of public UKOU documents by an expert analyst with Funding Council experience concluded that it was likely that their original business plan milestones had not all been achieved.²⁵⁹ In recent months there have been indications²⁶⁰ of an expected pivot (to some degree) towards corporate and professional training but no large-scale announcement had been made (at the time of finalising this report).²⁶¹

Iversity

Interestingly iversity is mentioned by several US analysts in the same breath as Udacity, etc – whereas FutureLearn is not (nor are any EU projects, however successful). One has to assume that this is because iversity is venture-funded whereas FutureLearn is a subsidiary company of the Open University who so far have provided all of its funding – and although some commentators would not approve, venture-funded MOOCs get most of the attention. In addition, and no doubt partly because of the visibility and transparency needed to attract venture funding, more is known about iversity.

The company started as a VLE provider in 2008 but in 2012 had an ultra-pivot into a MOOC aggregator. It now has 26 university partners, mainly in Germany but with groups in Italy and Russia, a couple in the UK and single institutions in a few other European countries.²⁶² Most courses are in English or in German. In October 2015 it reached 1 million enrolments.²⁶³ The original business model was to offer free courses but to earn revenue by the sale of Certificates.

²⁵⁷ <https://about.futurelearn.com/press-releases/futurelearn-has-3-million-learners/>, 1 February 2016

²⁵⁸ “Fast-track growth for social learning as OU builds on success of FutureLearn”, 12 November 2015 – <http://www3.open.ac.uk/media/fullstory.aspx?id=29550>

²⁵⁹ In “A brief note on FutureLearn finance”, David Kernohan observes: “Of the milestones in their business model (that are linked to capital allocation), we can intuit that they have failed to meet most of the final third. The announcement of this new £13m of capital before the remainder of the initial allocation suggests that FutureLearn have not and will not meet those final milestones, so a new business plan was required.” (<http://followersoftheapocalyp.se/a-brief-note-on-futurelearn-finance/>, 12 November 2015)

²⁶⁰ “We’ll be developing greater support for learning in workplaces and in schools, and growing our range of professional courses in areas such as healthcare, to address the huge demand for skills.” (<https://about.futurelearn.com/blog/welcoming-3-million-people-to-futurelearn/>, 10 February 2016)

²⁶¹ Added in proof: see <https://www.futurelearn.com/workplace-learning>

²⁶² <https://iversity.org/en/higher-education>

²⁶³ <https://iversity.org/en/pages/one-million-enrollments>

In June 2015 iversity made its own pivot towards professional development in companies, iversity PRO, described²⁶⁴ as “a for-pay offering that complements the MOOC line. With its PRO line, iversity is developing a large-scale portfolio of courses teaching business skills that every professional needs.”

One of the launch PRO courses – Visual Thinking for Business²⁶⁵ – was developed with WHU (Otto Beisheim School of Management), a private university in Germany.²⁶⁶ Interestingly several other private universities in Germany are in iversity – along with University of Buckingham (UK) and Madrid Open University (UDIMA) in Spain – but before readers jump to conclusions it should be noted that several prestigious public universities and entrepreneurial but lower-rank public universities are also members of iversity.

By March 2016 the iversity PRO had developed an “iversity for Business” direction with several prestigious clients.²⁶⁷

It is reported that iversity has received \$7.3 million in equity funding over 5 rounds with the last round being in October 2015.²⁶⁸ This is a very small amount compared not only with the US MOOC aggregators but also smaller than FutureLearn. Yet iversity has 26 partners and is well regarded, being seen in some circles as more “European” than FutureLearn.

It is tempting to draw the conclusion that the business model for iversity is working well. One reason may be the care that has gone into integration into the ECTS system. This was first announced²⁶⁹ as long ago as September 2013 with two institutions:

Good news for all MOOC students on iversity: From now on, participants can obtain ECTS credits in two of our courses – and more will follow. If you’re enrolled and pass the exam at the end of the course, the professors will issue a certificate that your home university will recognize – all over Europe!

Welcome to our first two ECTS-certified MOOCs:

In mid-October 2013, Prof. Marc Opresnik, from Lübeck University of Applied Sciences (FH Lübeck), will launch his course “Fundamentals of Marketing”.

Prof. Oliver Vornberger, an e-learning and computer science expert at the University of Osnabrück, will be giving a lecture on “Algorithms and Data Structures” in the summer term 2014.

There is a comprehensive set of FAQs on ECTS matters.²⁷⁰ However, many details seem not be public, and as usual with credit transfer, much is left to the discretion of the institution considering the credits that the student wishes to bring in from the provider.

The Eurydice (2013) summary report on *Recognition of Prior Non-Formal and Informal Learning in Higher Education* has a useful map (Figure 3) describing the state of play in European countries, but from our own experience the colouring, especially of the green countries, could be regarded as optimistic.

²⁶⁴ <https://iversity.org/en/pages/one-million-enrollments> again

²⁶⁵ <https://iversity.org/en/courses/visual-thinking-for-business-make-your-point>

²⁶⁶ but highly ranked, with multiple business school accreditations and a joint Executive MBA programme with the prestigious Kellogg Business School in the US – for more see <https://www.whu.edu/en/>

²⁶⁷ <https://iversity.org/en/pages/iversity-digital-transformation-curriculum>

²⁶⁸ <https://www.crunchbase.com/organization/iversity#/entity> and linked pages – details are sketchy compared with US entities – but see <https://iversity.org/en/pages/financing-round-in-the-millions> for details of the funds that have invested

²⁶⁹ ECTS credits for MOOCs on iversity, iversity blog, 18 September 2013 – <https://iversity.org/blog/ects-credits-moocs-iversity/> – and further details at <https://iversity.org/en/pages/moocs-for-credit>

²⁷⁰ <https://iversity.org/en/pages/support> – see section IV

Readers are referred to reports on their own countries²⁷¹ and are advised to contact the various consortia that oversee this. For example the Northern Universities Consortium²⁷² which covers Northern and Central England and Northern Ireland, and by UK standards, works well in such matters. But it works nowhere near as well as is routine in the US.

ECTS has a long way to go.

What European universities are doing

There is a lack of public information on the reasoning behind the strategic responses that European universities are making (or not making) to the MOOC and online imperatives. This is why we must commend the team at Dublin City University in Ireland for their very open and frank analysis of their own strategic choices (Brown et al, 2015).

It is also known from public documents including OJEU tenders that a number of universities not formerly in relationships with commercial online or MOOC providers have recently considered their options or are currently considering their options in terms of going forward with online learning. These include the University of York (now a member of FutureLearn),²⁷³ University of Exeter and University of Sussex.

Conclusions for Europe

The key points that come out from the US pivots and recent developments in iversity and FutureLearn are that:

1. The business models for MOOCs become considerably more feasible if one extends “HE” to include elements of vocational and professional training as well as HE in the strict ISCED sense. However, in many European countries, universities are not particularly active in this area, though there seems to be a lack of Europe-wide reports quantifying this phenomenon.²⁷⁴
2. The business models for MOOCs become more feasible if the provider offers a certificate which has an ECTS value but which is not *itself* from an accredited institution. This is because the MOOC can be promoted *overtly* as vocational but *implicitly* as having an ECTS “transfer value” – provided that the institution wishing to accept the certificate agrees to this under its Accreditation of Prior Learning procedures. However, there appears again to be little documentation describing what actually happens. If the providing institution were to claim the Certificate had an intrinsic ECTS value from the provider, then they would be *providing* higher education: then, depending on the country there could be accreditation, quality or fee restrictions on their offering.

²⁷¹ *Review of credit accumulation and transfer policy and practice in UK higher education*, by Manuel Souto-Otero, Higher Education Academy, July 2013 – <https://www.heacademy.ac.uk/resource/review-credit-accumulation-and-transfer-policy-and-practice-uk-higher-education>

²⁷² <http://www.nuc.ac.uk>

²⁷³ The University of York and Massive Open Online Courses (MOOCs) – <http://www.york.ac.uk/media/cll/DigestMOOCs.pdf>.

Declaration of Interest: as stated in the document, the Sero HE department of Sero Consulting Ltd was an advisor to the University in these matters.

²⁷⁴ My own information is anecdotal from mainly UK and Sweden. Though in the UK it is uncommon for universities to offer VET courses – only a handful do so. (There are reputational but also fee and regulatory reasons for this.)

8. Conclusions

8.1 The context in which business models must operate

OER

1. Most Member States have some activity in OER in HE, though in some countries activity levels have declined since the period of active state funding (e.g. in UK and Netherlands).
2. Today, with the notable exception of France, few Member States have an ongoing policy to foster and fund OER in HE.²⁷⁵
3. At European level, OER seems to be getting less attention than Open Access and MOOCs.
4. OER material directly specified/developed/curated by the institution forms on the whole a very small fraction of the amount of content a typical student is required to consume – even in open universities.

MOOCs

5. Many Member States still have very little activity in MOOCs, but some do have substantial activity, including UK, France and Spain.
6. Apart from France and currently Netherlands, few other Member States have policies and funding to foster MOOCs. Yet MOOC activity is often at a much higher level than can be justified by the university mission and the viability of MOOC business models.
7. At European level, it is hard to discern the priority that MOOCs have in specific policy terms. There is some EU funding for MOOC implementation, but less than 10 well-known projects.
8. The total number of learning hours delivered by MOOCs in a country is a tiny fraction of overall study hours and usually a small fraction of the study hours delivered by DOL.

DOL (Distance Online Learning)

9. Only a minority of Member States have substantial broadly-based activity in DOL – these include UK, France, Spain and Sweden. A few others have an effective open university or other specialised DOL provider (Portugal, Austria, Cyprus) or small group of DOL-active campus HEIs (Ireland, Sweden).
10. Apart from France, no Member State has a clear policy to foster DOL. Indeed in some Member States, HE policy is a clear inhibitor to DOL even when substantial DOL exists (UK, Ireland, Netherlands, arguably some parts of UK).
11. At European level, there have been a number of reports on the issues of open, distance and lifelong learning but little sign of the reports so far influencing Member State or institutional behaviours.
12. Even in countries where DOL is active (UK, France, Spain, Sweden) the total number of learning hours delivered by DOL in a country is a small fraction of the study hours delivered by face-to-face provision. This is confirmed in part by the lack of attention to DOL paid by Quality Agencies (except in UK).

Fees

13. The structure of fees, grants and loans is very different between Member States and sometimes (as in UK) within Member States. Some countries have very low fees; many countries have low or medium fees; a few countries have high fees; rather more have very high fees for international students. The main divides in fee levels are between Bachelors and Masters degrees, EU and international students, full-time and part-time and distance students, and public and private institutions (which often charge high fees). This means that business models need to be grounded in a Member State (and maybe regional) context, and linked to the type of institution being considered.

²⁷⁵ There is, currently, OER project funding in Scotland but little evidence of a policy framework; Wales has a framework but now no funding.

Other issues

14. Several of our conclusions are tentative. There is an ongoing lack of systematic, funded, and organised research covering the scale of OER, MOOC and DOL activity across **all** the European Union Member States and other European countries.
15. Systems to deliver MOOCs are increasingly similar to those used to deliver VLEs, so much so that the same analytic tools can be used to compare them. The leading VLEs (Canvas and Blackboard) have variants to deliver MOOCs; the time is getting close when the best MOOC systems (e.g. Edcast) will be indistinguishable from VLEs.
16. Despite much promising research and even more hyperbole, there are no established techniques to substantially reduce teaching costs via use of information technology for typical university students. Such reductions as come about arise from stripped-down HE providers (without much of the clutter of traditional universities) or from a minimalist pedagogy appropriate for only a small minority of indomitable learners or acceptable only in the past or in student populations far from regulatory gaze. Personalisation and competency-based learning are likely to provide some reduction (within a reinterpreted ECTS), but much research remains to be done on appropriate pedagogies and systems.²⁷⁶

8.2 Business models

DOL

1. In a few Member States (neoliberal and speaking a global language), there is a viable business model for DOL. **When** fees can be close to²⁷⁷ the economic level **and** there are no restrictions on student numbers, then each new student is worth having.
2. The model can be made to work even better when the state allows students to draw down a loan for study (UK/England; US – and also for approved private providers).
3. If there are restrictions on student numbers in theory, it may turn out in practice that due to local factors an HEI may be under its quota (perhaps because it was set in more prosperous times); or that the HEI can lobby its government to have its quota increased; or that in reality there is no quota for part-time or DOL students because the government wants (discreetly) to encourage them.²⁷⁸
4. Interestingly, unlike for MOOCs, there are very few developments to flex the business model, beyond various monthly payment schemes.
5. Despite appearances, venture capitalists are most interested in this model, either setting up new private providers, or partnering with existing public providers. This does not mean that it is easy to make money from such arrangements, especially in Europe – though a few providers such as Laureate or RDI (part of Capella) have done useful amounts of business in Europe.
6. In a number of countries where higher education is free (for full-time students) it is possible to charge fees to part-time distance learning students (Ireland, France etc). However the fees are not usually high enough to provide a viable business model – unless drastic simplifications are made in the mode of provision – leading down the road of using MOOCs.

²⁷⁶ https://www.academia.edu/13029473/Time_and_e-learning_The_cost_and_time-effectiveness_of_online_learning_providing_a_perspective_on_Microlearning_and_the_differences_between_academic_and_corporate_views, January 2012

²⁷⁷ or even above

²⁷⁸ this was more common in pre-recession times

MOOCs

7. The two main MOOC business models are (a) *freemium*, where everything that really makes the course valuable to learners, such as exams, accreditation as an HE module, career advice etc is paid for; and (b) *loss-leader*, where the institution recovers its costs through increased income on other activities.
8. Over the years since MOOCs started, the freemium model has been under pressure, with most recently Coursera (2016)²⁷⁹ decommitting most fully from it.
9. The loss-leader model is perhaps most fully developed. In its purest UK form, this expects that students enjoying a FutureLearn MOOC will be motivated to come to the campus of the host university to study a Masters²⁸⁰ – alternatively to stay at home and study one of over 800 online MSc degrees. In countries where Masters degrees command high fees, especially for non-EU students, even a low conversion factor is viable.
10. There is a secondary loss-leader route, *impact*. In countries with an intrusive metrics-based research assessment exercise (UK), *impact*²⁸¹ of research is a key measure: high impact contributes to high research ranking, which in turn leads to higher pay-outs from the government when the next research assessment exercise takes place.
11. There is another business model – *civic role* – of interest in these institutions expected to have a social mission to the community or the world, and lucky enough to be in a country where universities are still relatively well-funded (such as England). Many UK elite institutions were set up with a strong focus on adult education and not all of this mission has dissipated. Thus a small amount of MOOC activity can be justified on this basis. But such a model cannot scale, unless other business models come into play. And across Europe, adult education is very badly funded.
12. There is some evidence of a fourth model – *hovering*. In countries (such as UK) where in theory there is a vibrant model for DOL at postgraduate level, but in reality market conditions are leading to reducing overall numbers and increased contestation, teams can be refocused on MOOCs, maintaining competence levels and piloting innovative potentially cost-reducing techniques, awaiting the return of better market conditions or increased government support of DOL.
13. *Research* into online learning may be another business model in a few institutions.
14. *Zero courses* (courses with zero ECTS points, e.g. for teaching generic skills) are useful in certain circumstances and can even be shared between institutions.
15. MOOC aggregators can deploy some of the above models but have their own model, *third party* – selling student data to employers or advertisers. So far such models seem rather marginal in their effect. One should not discount such models (since many social network companies started in this way) but the route to viability via this route is likely to take years.
16. The business models for MOOCs become considerably more feasible if institutions extend “HE” to include elements of vocational and professional training as well as HE in the strict ISCED sense, thus acting (as some do) as a private training provider.
17. The business models for MOOCs become more feasible if the provider offers a Certificate *which has an ECTS transfer value but which is not itself from an accredited institution*. Thus the course is not an HE course but the certificate indicates that it could have an HE value as Prior Learning. Care must be taken as if the providing institution were to claim the Certificate had an *intrinsic* ECTS value *from them*, then they would then be providing additional higher education and depending on the country there could be immediate accreditation, funding, quality or fee restrictions on their offering.

²⁷⁹ Coursera, blog, 19 January 2016 – <https://blog.coursera.org/post/137649201147>

²⁸⁰ or even a PhD

²⁸¹ think of this as valorisation in the EU R&D context

OER

18. In Europe, there is as yet no viable business model for OER in HE. The North American *Open Textbook* model, which has begun to work in the US and Canada, has not got started in EU.²⁸² Reducing the “course” focus typical of MOOCs to a “resource” focus typical of OER makes the business case harder, not easier. Some large institutions claim that the loss leader approach works but evidence is scanty.

8.3 Methodological conclusions

European institutions interested in substantial innovation in this area and wishing to learn from the US should:

1. Take great care in drawing *overall* conclusions for European practice from experience in the US; and take especial care with experience from California and in particular Silicon Valley.
2. Focus on *current* developments in the US, not on the long and winding road to their current approach to MOOCs:
in general, where the US has *got to now* is where Europe should *start*.
3. Accept that there are US practices worthy of attention in many Member States:
 - close integration of the vocational education sector (ISCED 4) with the HE sector (ISCED 5-8);
 - the importance given to vocational skills (such as programming);
 - systematised easy credit transfer.But bear in mind the traditionalist approach to HE quality in some parts of Europe and the unhelpfully different quality regime for vocational programmes (except in a few Member States).
4. Bear in mind the greater financial resources and strategic flexibility of many US institutions.
5. Check the funding sources for any development (even in the US) before making assumptions on its sustainability.
6. Accept that business models work better in the US because fees are higher and there are no admission quotas on student numbers – furthermore the loan scheme has no quotas on it either (not yet).
7. Understand that population and immigration dynamics in the US are completely different from Europe²⁸³ and there are massive skill shortages especially in some US states, leading to many emergency strategies.
8. Accept that employment laws are very different and employment is much less secure – this can mean in the US that competence can be taken on trust, since if staff turn out not to conform to the skills on their certificates, they will be dismissed.
9. Remember that the overheating of some US economic sectors (such as IT) are very different drivers compared with some Member States.
10. Realise that despite 20 years of warnings and hyperbole from them and European commentators, US institutions are still not very interested in fee-charging online provision beyond US political boundaries except to specialised communities of expatriates, military personnel and graduate professionals. *Europe still has a window of opportunity.*

²⁸² such activity as continues is funded out of other income, with little visible evidence of payback.

²⁸³ see <http://www.migrationpolicy.org/article/frequently-requested-statistics-immigrants-and-immigration-united-states> – note in particular: “In 2013, there were 35.7 million immigrants ages 25 and older. Of those, 28 percent had a bachelor's degree or higher compared to 30 percent among native-born adults. In addition, 30 percent of immigrants did not have a high school diploma or General Education Development (GED) certificate versus 10 percent of their native-born counterparts.”

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A. Annex – what is a MOOC?

This work was originally done for an earlier project to justify using the same analytic framework for selection of MOOCs as is used for selection of Learning Management Systems. This was done, successfully, in two projects in 2013 and 2014. It has been updated for the purposes of this Annex.

Literature search

Wikipedia defines a MOOC as:²⁸⁴

A massive open online course (MOOC) is an online course aimed at large-scale interactive participation and open access via the web. In addition to traditional course materials such as videos, readings, and problem sets, MOOCs provide interactive user forums that help build a community for the students, professors, and teaching assistants (TAs). MOOCs are a recent development in distance education.

Features associated with early MOOCs, such as open licensing of content, open structure and learning goals, and connectivism may not be present in all MOOC projects, in particular with the ‘openness’ of many MOOCs being called into question

So the key features seem to be:

1. massive
2. online – in fact a species of distance education
3. a wide variety of content objects – video, text (readings) with some types of assessment objects (problem sets)
4. interactive user forums
5. open, ideally with open access (anyone can join in) and open licensing of content.

Features 2, 3 and 4 are typical of the “online content and collaboration” pedagogic model prevalent in US online education and many (but not all) open universities since the early 2000s (or before). So this trio of features are similar to those one finds in the typical LMS (VLE in UK).

The concept of “open learning goals” seems to differentiate (to some extent) MOOCs from the typical university course with its learning objectives – though of course these can and sometime are phrased in a general way.

Wikipedia defines Connectivism as:²⁸⁵

Connectivism is a theory of learning which emphasizes the role of the social and cultural context opposed to a more essentialist notion which foregrounds the individual.

Connectivism is often associated with and proposes a perspective similar to Vygotsky’s ‘zone of proximal development’ (ZPD, an idea later transposed into Engeström’s (2001) Activity theory. Central to connectivism is the relationship between work experience, learning and knowledge, as expressed in the concept of ‘connectivity, thus the root of the theory’s name. It bears some similarity with Bandura’s Social Learning Theory that proposes that people learn through contact. The add-on “a learning theory for the digital age”, that appears in Siemens’ paper indicates the emphasis it gives to how technology affects how people live, how they communicate and how they learn.

To someone brought up on constructivism in the 1990s, this looks pretty similar. Indeed, many masters programmes were developed in the 1990s based on the “relationship between work experience, learning and knowledge” and some even taught online, with standard university and national quality assurance guidelines. So were early developers of MOOCs ignorant of the literature

²⁸⁴ http://en.wikipedia.org/wiki/Massive_open_online_course

²⁸⁵ <http://en.wikipedia.org/wiki/Connectivism>

of ten years before? This is not the place to discuss that, but a blog by Ryan Tracey makes some telling points.²⁸⁶ In particular:

In today's environment, I see an expert as one who couples a rich foundation of knowledge with the capability to connect to new knowledge at a moment's notice.

Having disposed of that issue, he issues a useful synthesis:

In the workplace, it's clear that instructivism, constructivism and connectivism are not necessarily mutually exclusive.

The astute e-learning practitioner will apply principles of all three, as circumstances change and their respective relevancies rise and fall. As I have suggested, this may align to the learner's transition from novice to expert in a particular domain.

From a practical perspective then, is the popular "evolution" of instructional design from instructivism through constructivism to connectivism a furphy? All three pedagogies build on one another to provide a rounded theoretical toolset for the modern professional to exploit.

It would be a fascinating conference paper to discuss this further, but the aim of this Annex is to produce a concise list of MOOC features. A good place to begin with is with a student view. Adam Heidibrink, from his experience with Canvas, Coursera and edX, makes some cogent criticisms.²⁸⁷

While in all three cases, the information is navigable, their information design models appear more suited for a Web 1.0 environment. The content is static, updated once a week (usually Mondays), which produces little interest in returning to the site again before the following Monday. Interaction with other students is restricted to the forums, thus situating each participant as an isolated, autodidactic learner. The information is painfully linear, as each week tacks on yet another 10-20 subsections, by week ten, you find yourself scrolling to the bottom of an infinitely long page.

This is not the web 2.0 environment that many dreamt of. He goes on:

MOOC platforms, as they are designed currently, do not reflect the new hybrid pedagogies necessary to teach within, through and about a digital environment. Many of their features have been simply lifted from various classroom methodologies. I find it deeply problematic that the current normative structure for MOOCs consist of video lectures of talking-heads, supplemented with readings and usually optional and somewhat strained discussion. Some go beyond this, sure, but not far beyond and not very often.

To a distance learning expert, this does not seem much to show for over 20 years development of online courses. But of course the people developing these MOOCs were not from the distance online learning community – they were beginners.

Another sophisticated student, Gordon Berry (a retired academic) gave a trenchant criticism of a Coursera MOOC course in 2012, finishing with a vision of a way forward.²⁸⁸

While basic topics such as the validity of various learning theories can be joyfully debated until the cows come home in a connectivist cMOOC, this seems less appropriate for the 'hard' sciences, such as physics and chemistry, where a knowledge of fundamental procedures and processes is essential for even basic comprehension, let alone expertise. Here, facts are, ... well facts, and becoming familiar with them by slogging through the mathematics and other donkey work is likely to be more productive than protracted debate. Now, having joined an xMOOC in the shape of Coursera's Quantum Computing Course, I am

²⁸⁶ <http://ryan2point0.wordpress.com/2009/03/17/instructivism-constructivism-or-connectivism/>

²⁸⁷ <http://moocnewsandreviews.com/can-mooc-platforms-be-more-dynamic/>

²⁸⁸ <http://gbl55.wordpress.com/2012/08/10/c-or-x-moocs-make-way-for-the-super-mooc/>

finding out for myself. This is not a course for beginners but I do at least have some of the required background.

Calling a cMOOC a 'course' has always struck me as a misnomer – but not so for a Coursera xMOOC. The course I'm on has a well-defined curriculum of 8 week duration ending with a 3 hour timed examination. New course content in the form of notes and several shortish videos are released every week and there are weekly assignments to be tackled. The assignments can be submitted and auto-marked – frustratingly, only correct answers seem to generate feedback! The professor in the videos does a good job but is very much 'sage on the stage'. His explanations are competent and helpful although sometimes the course notes do not match in very well with the videos. I have yet to see the prof descend from the stage and interact directly with learners in the discussion forums. A TA deals with admin matters there (typos in the notes or gremlins in the marking system etc) but evidently not with queries on course content. Queries of this type, at all levels of difficulty, are left to other participants but fortunately there are several individuals (not me!) who appear well-qualified to help out. They devote considerable time and energy to providing personalised assistance and are able to lead informed discussion. This 'unofficial' bonus is clearly appreciated by other participants and contrasts with the relentless one-way transfer of content from sage to student.

Receiving the "statement of accomplishment"²⁸⁹ depends on overall performance on 7 assignments plus the final exam and there is a complicated marking scheme involving penalties for late submissions of the assignments. No doubt carefully crafted to suit the diverse circumstances of participants, its fairness seems doomed to endless debate in the forums! This obsession with the mechanics of assessment and the tacit assumption that expertise at this level can be properly measured by not much more than multiple-choice questions is disconcerting. I conclude that there's nothing like a bit of old-fashioned xMOOC behaviourist pedagogy for learning the basics and, like many others on the course, I've certainly found the experience interesting and enjoyable – as far as it goes. It may not go much further for me though as real life intervenes and keeping up the pace takes an ever-increasing amount of time. I have no particular interest in 'passing' the course but yet part of me is spurred on by the fear of 'failure' that still dogs the survivors of 20th century formal education (along with 'exam dreams'!) Another part of me just wants time to study some of the more interesting course topics in detail before moving on. That's me – but the 'Massive' in MOOC delivers a wide diversity of other participants with other learning objectives who want something else. This of course is not usually the case for the traditional college courses on which Coursera and other xMOOCs appear to be based.

It seems to me that a MOOC has the potential to provide learners with a degree of choice way over and above what is possible in traditional courses. Imagine as an ideal, some sort of multi-layered, many-pathed super-MOOC offering a multitude of different modes of participation. Sub-courses on prerequisite topics are available on tap and the path traversed by different learners can, with or without advice, take many different possible routes through copious notes, videos, interactive quizzes and so on depending on the background and objectives of individual learners – even 3 hour timed exams to be taken if you must! Human assistance is available for the asking – perhaps via scores of previous participants who have already demonstrated their usefulness and are rewarded somehow for their assistance. The financial implications are beyond me but could such a super-MOOC not evolve relatively inexpensively from small beginnings by developing content and infrastructure over several iterations as ever-increasing numbers of participation modes are catered for?

²⁸⁹ badge.

Returning to the humble MOOC of today – this is a testing time as the altruism and openness that gave birth to the original cMOOCs is challenged by the new style xMOOCs with their focus on existing Higher Education practices and ways and means of ‘monetising’. I can only hope that the aspirations (below), expressed almost half a century ago, will not be lost in the process!

“Higher education shall be made equally accessible to all, on the basis of capacity, by every appropriate means, and in particular by the progressive introduction of free education.”

Jenny Mackness and her co-authors make similar telling points in a more scholarly analysis well grounded in the traditional literature.²⁹⁰

September 2008 saw the launch of the first massive open online course (MOOC) of its kind (University of Manitoba, 2008). It was effectively a small credit-bearing course for 24 students, within an open-access network for over 2200 registered participants, of whom about 150 were actively interacting at various times.²⁹¹

This course was unique in the number of participants it attracted, the use of distributed technologies for communication and because the course was used to present a new theory of learning – ‘Connectivism’ (Siemens 2004, 2009a). The ideal was that participants would learn about connectivism by exploring both the experience and the theory. This paper will argue that in reality the experience was mixed and the theory was challenged on many fronts. The experience was, in part, positive and stimulating, and in part frustrating and negative. The basic theoretical concepts were interesting and useful, but whether or not connectivism is a new theory has been the subject of much discussion and debate by CCK08 participants and in the wider community, and remains undecided.

In terms of more pragmatic consideration, a very useful conceptual article is on the Researchity site:²⁹²

Introduction

Massive Open Online Courses, or MOOCs for short, have been getting a lot of attention recently. There have been several high profile posts... complaining about the lack of clarity about what constitutes a MOOC (and I think this resulted in a more generalized MOOC backlash). This is an attempt to draw up a picture of what MOOCs look like and what they don’t look like. It is not a definition in the traditional sense (an undefinition, perhaps) but I think it captures the idea.

MOOC: A portrait of family resemblance

Let’s consider some features of online education that could be candidates for MOOChood and group them according to how useful indicators of MOOCness they are. This will make it possible to judge how well a given MOOC candidate resembles other MOOCs.

Minimal feature requirements for MOOChood

These features describe all MOOCs. A course has to pretty much meet all of these to be considered for a MOOC.

- To satisfy the label of **massive**: Give access to a larger group of students than a single class or institution could (this could be a small absolute number in case of very specialised subjects)

²⁹⁰ <http://www.lancaster.ac.uk/fss/organisations/netlc/past/nlc2010/abstracts/PDFs/Mackness.pdf>

²⁹¹ this point is particularly interesting

²⁹² <http://researchity.net/2012/08/14/what-is-and-what-is-not-a-mooc-a-picture-of-family-resemblance-working-undefinition-moocmooc/>

- To satisfy the label of **open**: Are open access in the sense of not requiring a test of prior knowledge (though such may be recommended) or enrollment in a larger course of study in an institution (though this may be possible, see below)
- To satisfy the label of **open**: Do not require payment just for access to content and peers. But payments for other things (like tutor support, assessment, participation in ancillary events) may not be free.
- To satisfy the label of **online**: Use an online method of delivery making the most of what the web medium has to offer. Ideally utilising multiple modes of delivering content (video, audio, text, animation). This could be pre-recorded, live or a combination of the two.
- To satisfy the label of **course**: Follow a course of study with time-sensitive elements towards a specified learning outcome or a set of outcomes.
- To satisfy the label of **online course**: Facilitate asynchronous interaction between as many participants as possible. This can be done via course-specific forums (ideally with some curation facility such as voting up and down) *or via generalized platforms such as Twitter or Blogs and comments.*

I think all courses that are called a MOOC, these days, will meet these criteria.

Salient but optional MOOC features

These features are typical of some MOOCs with a broader interpretation of openness. *Some people consider these to be essential.*

- Define *open* and *online* in such a way that it does away with the constraints of the VLE and having students use the open web
- Extend definition of *open* by relying on *open content in the strict sense (openly licensed, as well as free)*
- Take advantage of *online* by providing opportunities for openness *by encouraging the creation of new content by participants and/or curation of existing content as part of the learning process*
- Extending the definition of open by encouraging the creation of *Personal Learning Networks* by participants that break outside the typical walled-gardens of a course

Most connectivist MOOCs (or cMOOCs) will meet these criteria, but most xMOOCs by Coursera, Udacity and edX will not.

Edge features of a MOOC

These features break or bend one of the minimal requirements but might still qualify as a MOOC in some instances if the overall shape is sufficiently MOOC-like. Individual will vary in their willingness to accept something with these features as a MOOC.

- Untimed learning communities working towards a learning outcome break the course criterion of time-boundedness. This could be because, there are no paced activities – e.g. weekly focus, or no specified end. But with sufficient family resemblance a “course” like this could still be considered a MOOC.
- Accredited online courses allied with a specific institution may not fully comply with the criterion of open but if they allow outsiders, they will still qualify as a MOOC.
- Events without any specified learning outcomes might still be considered MOOCs if they specify learning experiences, instead.

Disqualifying properties for a MOOC

These things might have some limited properties of a MOOC but not enough to be considered one. They generally do not have the “look of a MOOC” but are sometimes listed in the same context.

- Collection of freely accessible learning materials (Khan Academy, iTunes U, Open Courseware) are *massive*, *online* and *open* but **not a course**.
- Lecture series without an *outcome* (LSE public lectures, New Books Network) are online and open but **not a course** and **may not be massive**.
- A continuous generalized Personal Learning Network is *online* and *open* but **neither massive nor a course**.
- An online learning or study support community is *online* but it's **not a course** and **may not be either massive or open**.
- Large scale live online lectures/webinars (Michael Sandel, Reith Lectures) are *massive* and *may have some course-like properties* but offer limited interaction between participants. But do not have a family resemblance to a MOOC.

Conclusion

Despite much handwringing about how difficult it is to define a MOOC, I think it's actually not that difficult after all. As with all cases of family resemblance, this picture will evolve over time and will vary with individual perceptions and perspectives. But I think it provides a fairly accurate overview.

I am, of course, looking forward to corrections, clarifications, and howls of protest, in the comments.

This proves to be the most useful article of all.

Conclusion

So a general canter round such reports suggests the following functional features other than *massive* and *open* (*online* is of course implied):

- a course, so a beginning and an end
- content objects – perhaps an over-focus on video and text
- assessment objects – no signs of great sophistication
- interaction objects – focussing on the interactive (asynchronous) user forums, the sturdy workhorse of US online learning.

Thus a MOOC seems very much like a course and the system delivering it seems very much like an LMS.

Views from the real experts

It is often useful to start such analyses by considering the views of Tony Bates. As quoted in Sir John Daniel's excellent report *Making Sense of MOOCs*,²⁹³ he says:

...Bates (2012) addresses the myth that xMOOCs are a new pedagogy. In fact, he notes, so far the teaching methods 'are based on a very old and out-dated behaviourist pedagogy, relying primarily on information transmission, computer-marked assignments and peer assessment'. He goes on to remind the xMOOCs movement that it did not invent online learning and that the useful techniques that it is discovering – and likes to claim it has invented – are already well known in distance learning and in some cases go back 40 years.²⁹⁴

²⁹³ in full, *Making Sense of MOOCs: Musings in a Maze of Myth, Paradox and Possibility*, <http://www.tonybates.ca/wp-content/uploads/Making-Sense-of-MOOCs.pdf>

²⁹⁴ In his actual paper he goes on the attack: "Third, and this is the most enraging part of the presentation for me, Daphne Koller talks as if she invented online learning, and that nothing was known beforehand about works and doesn't work in online learning. So she has discovered that students learn better if they are active, so there are lots of tests and activities in the courses. It is better to break up monolithic one hour lectures into smaller, more digestible chunks. *Both these strategies in fact date back to the UK Open University print packages forty years ago and it has been standard practice to*

Another myth is that computers personalise learning. Bates (2012) again: ‘No, they don’t. They allow students alternative routes through material and they allow automated feedback but they do not provide a sense of being treated as an individual. This can be done in online learning, but it needs online intervention and presence in the form of discussion, encouragement, and an understanding of an individual student’s needs’. It is here that we find the greatest difference between the xMOOCs and the earlier cMOOCs, which have a strong focus on online discussion.

In completing his debunking of xMOOCs myths, Bates (2012) points out that the primitive use of ‘big data’ referred to by Koller (2012) is not learning analytics but simply a way of catching errors that should never have found their way into the course in the first place.

However, all this polemic, however justified, does not give us a *list of features*. So the alternative approach is to look at what features have emerged in MOOCs and focus on those which do not draw the ire of critics, illustrious like Tony Bates, or otherwise. To begin with it is reassuring to hear from Randy Riddle at Duke University, that:

There’s nothing particularly new about MOOCs. Most universities have offered online courses for many years and the basic technologies involved – video lectures, discussion forums, tests, and the like – are the same we have used with on-campus and distance students. The only difference is the scale.

Duke U do know a lot about online learning – unlike many of the late entrants and many entrants to the MOOC world. Similarly Exeter University have a nice table describing a typical MOOC offering:

Activity	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Delivered e.g. Read, Watch, Listen, Observe								
Reflect e.g. Think, Consider, Reflect								
Collaborate e.g. Construct, Collaborate, Define, Engage								
Converse e.g. Debate, Argue, Question, Discuss, Describe								
Network e.g. Connect, Share, Interact								
Browse e.g. Explore, Search, Find, Discover								
Assess e.g. Answer, Present, Write, Demonstrate, Critique								

This is all pretty straightforward and standard – *but only if one is used to online learning already*. To novices it might well seem innovative.

incorporate such strategies in most online learning since it began on a serious scale 20 years ago.” See <http://www.tonybates.ca/2012/08/05/whats-right-and-whats-wrong-about-coursera-style-moocs/>

The University of Lethbridge (in Canada) makes a useful point about implications of the scale.²⁹⁵

5. Focuses heavily on authentic peer evaluation, and peer reflection processes

Because the course takes on an unlimited amount of users, it is hard to build in assessments that are implemented and evaluated solely by the instructor. MOOCs tend to use peer evaluation and peer reflection processes to help students explore and develop ideas and topics covered in the course.

This is very much an authentic process if you compare it to a working environment. For example, let's look at what you could do if you were tasked with exploring and implementing a new office software in your office. Most likely you will do the research to see what is available (identify initial resources, exploration, research). Then you would ask people what their needs are (conversation and interaction, feedback). You would then explore how these different systems stack up against each other (compare, contrast, explore), while comparing them to your office's comments and needs. Finally after incorporating multiple perspectives and resources into the decision making process, you will identify a software suite that would work for your office's needs (analysis and evaluation)

Features of a MOOC: the synthesis

Distilling this information generates the following list of compulsory and optional features:

Compulsory

1. A software system or more or less integrated collection of subsystems
2. Content objects, typically with a focus on text and video in that these are seen to be easier to generate than multimedia and interactive objects
3. Asynchronous interactive forums in typical "Open University" style (and typical of much US online learning)
4. Simple automated assessment (quizzes) for multiple-choice questions, with feedback
5. Peer assessment with comments and scores
6. Badges: certificates of completion.

Optional

1. Integration with an LMS, content repository etc
2. Setting up of a system of tutor groups and work groups within each MOOC course
3. Content objects, including other simple types like photographs and podcasts, but also multimedia, interactive subsystems and simulations
4. Other asynchronous media, in particular blogs
5. Synchronous systems including Twitter and shared-screen subsystems (e.g. WizIQ)
6. Complex automated assessment (such as QuestionMark)
7. Summative assessment via human-graded assignments with security and plagiarism-checking
8. Final examination, proctored with security checks
9. Credit-bearing, integrated with university, regional and national accrediting bodies
10. Pass-through from the open MOOC into a closed system with the same features, provided that some test has been passed and possibly some fee paid.

²⁹⁵ <http://www.uleth.ca/teachingcentre/blog/what-mooc>