

Transnational Education
Global Changes, Local Opportunities

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“In fifty years, if not much sooner, half of the roughly 4,500 colleges and universities now operating in the United States will have ceased to exist. The technology driving this change is already at work, and nothing can stop it. The future looks like this: Access to college-level education will be free for everyone; the residential college campus will become largely obsolete; tens of thousands of professors will lose their jobs; the bachelor’s degree will become increasingly irrelevant; and ten years from now Harvard will enroll ten million students”

Nathan Harden
The End of the University As We Know It

Transnational Education Global Changes, Local Opportunities

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1.0 Introduction

Massive Open Online Courses (MOOCs) have become among the hottest topics in higher education in 2013. On one side are people like Nathan Hardan, quoted on the title page of this document, who believes it will totally transform the landscape of higher education. Others are not so enthusiastic about its prospects of longevity, yet everybody is talking about it. MOOC is probably one of the most important developments in transnational education, with potential to do significant good and bad to the higher education scene in the developing world. It is therefore important these issues are discussed, understood and planned for by the academic community all over the world. This background paper provides the reader with a macro view of this phenomenon and its potential impact on Kerala's (India's) education model.

1.1 Transnational Education - What is it?

Transnational education (TNE) is an educational context where the student receiving the education is not in the same country as the institution offering the educational services. While TNE by itself is not new, the changes happening in scale of adaptation of TNE is already changing the landscape of higher education in the decades to come. A combination of technological, regulatory, academic and economic factors is behind this new found enthusiasm for transnational education. This paper is an attempt to present the basic elements of TNE, its trends around the world, the role it will have in the Indian educational landscape and finally how Kerala can harness the potential of TNE.

1.2 TNE Definitions

Internationalisation of education is not a new phenomenon. Students have been migrating from one region to another in search of good teachers for millennia and millions of students travel across the borders every year for higher studies in other countries. Transnational education is one of the subsets of internationalisation of education but with the defining factor that it is not the student who is migrating towards the programme or university.

There are many definitions of transnational education and some of the definitions widely used and understood are given in Table 1.

Table 1 Definitions of Transnational Education

Name of Institution	Definition
Global Alliance for TNE (1997)	Transnational education denotes any teaching or learning activity in which the students are in a different country (the host country) to that in which the institution providing the education is based (the home country). This situation requires that the national boundaries be crossed by information about the education, and by staff and/or educational materials.
Council of Europe, Lisbon Recognition Convention (2002)	All types of higher education study programmes, or set of courses of study, or education services (including distance education) in which the learners are located in a country different from the one where the awarding institution is based.
UNESCO/OECD Guidelines for quality provision in cross bordered education (2005)	Cross-border higher education includes higher education that takes places in situations where the teachers, student, programme, institution/provider or course materials cross the national jurisdictional border.

The following are the key features of TNE that is evident in all of the definitions above and many more which have been proposed since:

1. The educational service is offered by an organisation in a base country.
2. The students are also based in another country (or countries).
3. It is the educational service which is crossing the national boundary or “transnational”.

1.3 Types of Transnational Education

Distance Learning Programmes: The oldest form of transnational education is the “distance learning programme” where an educational institution provides its academic content to learners outside its academic premises. This has been ongoing for more than a century and the earliest distance learning programmes were based on the course content being sent to the students for self study. The student then take an examination conducted by the awarding institution to receive a qualification, be it a certificate or degree. While most of the recipients of the distance learning were from within the national boundary, there was no theoretical constraint to extending it beyond borders and TNE in its elementary form has been in existence since then.

Certification Programmes: In a variation of the distance learning programme, there were certifying agencies which conducted periodic examination in specific topics (e.g., English Language, computer networking skills, etc.) where students from any part of the world were eligible to take the exam.

The organisation only ensured the integrity of the examination process and learners were free to undertake their study in whatever manner they deemed fit. Students were then awarded certificates on a pass or fail basis (as in the CCNA system) or on a continuous scale (like TOEFL). While these certifying agencies often produced study material and private entrepreneurs conducted coaching classes for the same, the certifying agency did not specify that the student follow either of the above as a precondition for appearing in the exams.

Franchises: A more rigid version of the certification programme was the franchisee system wherein the awarding institution prepares a standard syllabus (and often study materials) and provides franchisee status to a number of institutions around the world to conduct training on the same topic. While the tutoring, and often the exams, are conducted by the franchisees, the certificate is provided by the awarding institution. The awarding institution, therefore, is responsible for the quality control of the franchisees in the way they deliver the course content and conduct the examinations. The National Examination Board on Occupational Safety and Health (NEBOSH), a well known certification system in safety, based in the UK, is an example of this system.

International Branch Campus: International Branch Campus (IBCs) is a comparatively recent phenomenon whereby an academic institution in one country sets up a subsidiary institution in another country and offers similar academic programmes (mostly degrees). The IBCs may be full-fledged universities (like the Curtin University's (Australia) Miri Campus (Malaysia) or a lighter version like the New Caledonian College (Oman) set up by the Caledonian University (UK). Table 2 shows the penetration of IBCs around the world as of May 2013.

Table 2 International Branch Campuses, Key Statistics, 2013

1	Total number of International Branch Campuses	188
2	Total number of host countries having IBCs	53
3	Country with maximum IBCs and number	UAE, 39
4	Single Biggest Cluster of IBCs	Dubai Academic City 23
5	Number of countries sending IBCs abroad (home countries)	24
6	Country with maximum export IBCs and number	United States, 88
7	Countries both importing and exporting IBCs	Australia, Belgium, Canada, China, France, Malaysia, Pakistan, Switzerland, UK

Double Degrees and Twinning: Another version of TNE is where two academic institutions from two countries come together and offer joint programmes. Both teachers and students, sometimes both, cross international boundaries to offer and receive the training. At the end of the course, students either receive a degree from the institution in the home country, with the courses taken in the host country credited towards it, or receive degrees from both universities. In some cases, the two academic institutions award joint degrees to the students. This approach can be seen as a hybrid between conventional student mobility and TNE.

Online Courses and Tuition Support: The arrival of Internet changed the dynamics of TNE as the exporting of academic content around the world has become exceedingly simple. This is now progressing in multiple directions. First and foremost, certifying institutions are offering a large number of training courses online, conducting exams and awarding certifications. In another variation, many reputed academic institutions are putting their academic content online but not providing continued support or conducting examinations. In another type of transnational education, online tutors in developing countries and providing tutoring support to students elsewhere.

Table 3 Types of Transnational Education Models

	Distance Learning	Twinning /Double Degrees	Franchises	Certification	IBCs	Online Learning
Student mobility needed	No	Some times	No	No	No	No
Tutor support given	No	Yes	Yes	No	Yes	No
Examination included	May be	Yes	Yes	Yes	Yes	May be
Certificates given	May be	Yes	Yes	Yes	Yes	May be
University credits included?	May be	Yes	May be	No	Yes	No
Cost	\$\$	\$\$\$	\$\$	\$\$	\$\$\$	Free to \$

2.0 Massive Open Online Courses (MOOC)

While all of the above has been in existence for more than a decade to a century, the current excitement in TNE comes from a few fundamental shifts in the online education scene which is threatening the very foundation of higher education. The following section details these developments.

2.1 What are MOOCs

The term MOOC was coined in 2008 by Canadian researchers Dave Cormier of the University of Prince Edward Island in Canada and Senior Research Fellow Bryan Alexander of the National Institute for Technology (Canada) in Liberal Education in response to a course called Connectivism and Connective Knowledge (also known as CCK08). CCK08, which was led by George Siemens of Athabasca University (Canada) and Stephen Downes of the National Research Council (Canada), consisted of 25 tuition-paying students in Extended Education at the University of Manitoba, Canada, as well as over 2200 online students from the general public who paid nothing. MOOC was a logical outgrowth of the Open Educational Resources (OER) movement where many universities around the world put their teaching materials freely and openly in public domain for teaching, learning, educational, assessment and research purposes. MOOC moved on from this basic model to registering oneself as a student at a real or “virtual” university which offered this course with a possibility to get graded.

While there is no single or authentic definition of MOOC, the following are the key features that can be identified as characteristics of MOOC.

1. The academic content of the course is made available free to the student.
2. The course content is delivered online, and all formats of course materials (text books, videos, interactive forms) can be used.
3. There no limit to the number of people who can take the course, hence it could be massive.
4. While it is not necessary for a student of MOOC to be graded, most MOOC platforms offer that as an optional extra.

In what has since become legend in the higher education domain, a course in computer science, offered by Dr Sebastian Thrun from Stanford University was taken by 160,000 students from 92 countries. The experience so overwhelmed Professor Thrun that he quit his job in Stanford and set up his own online university, called UDACITY, (pronounced YOU-DACITY, a play of words on You and Audacity) which is currently offering 25 courses with an academic enrolment of over 400,000. Since the Udacity experience, a number of new actors have come into the market and the most important ones are listed in Table 4 below.

Table 4 Providers of Massive Open Online Courses

Parameter	Udacity	Coursera	edX	Future Learn
Established in	2012	2012	2012	2012
For profit	Yes	Yes	No	
Funding	Sebastian Thrun and Venture Capita	Partner Universities and Venture Capital	30 Million Each for MIT and Harvard, 1 Million from Gates foundation + private partners	The Open University
Based in	United States	United States	United States	UK
Students from	Almost all countries	Almost all countries	Almost all countries	Almost all countries
Number of Universities offering courses	None	107	29	29
Subjects	Computer Science, Maths, Statistics and growing	Multidisciplinary, including medicine	Artificial Intelligence, Computer Science and growing	Science, Arts and growing
Medium of Instruction	English	12 Languages, 80 % in English, followed by Chinese, French and Russian	English	English
Number of courses offered	25	540	91	29
Total number of students registered	400,000	5,427,051	900,00	N/A

MOOC platforms have also come on stream in Australia, Germany and China.

2.2 Tipping Point

While MOOC is already happening, the tipping point in their role in revolutionising TNE will come when one or both of the following changes happen. These are accreditation of MOOC courses in the academic world and de-coupling between degrees and jobs in the labour market. Things are already happening in this direction but what is needed is widespread acceptance of these practices in academic and real world.

Accreditation: One of the unresolved issues in the MOOC system is accreditation of the courses that are studied online. While conducting an exam at the end of the online course and awarding a degree have both become more or less standard practices of the MOOC system, universities around the world still have not accepted MOOC courses as equivalent to courses learnt in classrooms. However, a recent academic study conducted indicated that the learning outcome from an interactive online study and a course taken in a traditional formal are essentially the same when measured against pass rates and final scores (Bowen W.G. et al, Ithaca S+R, 2012). The same study also did a speculative cost simulation and found that adopting hybrid models for instruction in large introductory courses have the potential to significantly reduce instructor compensation in the long run. As the evidence base of such studies increase proving both academic effectiveness and cost competitiveness, there will be increased acceptance of MOOC in the academic world and the labour market.

In most developed countries there are already systems for “equivalencies” for certifications provided by professional bodies with qualifications acquired by attending academic institutions. Therefore, systems to evaluate and incorporate MOOC obtained credits into mainstream academic programmes exist and the fact that it has not happened is more related to the very cautious nature of the traditional academic community than any conceptual difficulties with MOOC. A parallel development to the accreditation challenge is already emerging. Online universities are already offering certification of the online courses they offer. Online universities are already getting into partnership with private enterprises to accept their certification for employment as well as promoting the jobs obtained by their students on their websites. A combination of these forces will break the resistance from the academic community to create a seamless credit transfer between the “virtual world” and the “real world”.

Decoupling: Higher education, for most people, is an effort to improve their employability and increase their chances of getting better jobs. Universities have traditionally taken on the task of screening the students for higher studies, putting them through a series of courses and awarding them with a degree to recognise their achievements. The labour market, in turn, uses the type of degree and the prestige of the academic institutions as a proxy for the employability of the student.

There is an increasing realisation by employers around the world that the academic world is failing in its duty to produce “employable” graduates. The academic rigidity of the university system teaches the students a range

of courses and skills which does not correspond to the requirements of the real world. Also, while the requirements of the individual employer will vary, universities by their very nature can only have limited flexibility in their programmes which should prepare the student for a range of potential, unknown, jobs and employment. Consequently, on one hand the student has to learn a range of subjects he/she will never need in their future employment while the employer has to spend significant resources to retrain the new recruit to make them suitable for their organisation. Employers can specify the range of skills they wish to have in their recruits and the students can acquire them from the provider who offers the most appropriate course. The employer may require a graduate from a specific university, or somebody who has done selected courses from prescribed universities or have been certified by an independent agency for their skill levels. The potential employees have the option to pick and choose their academic backpack based on the type of employment they are seeking. A combination of technical, computing, management and cultural skills will become the mandatory items in the backpack of any aspiring employee in future.

2.3 Where is the Money in MOOC?

One of the basic premises of MOOC is that the basic course is “open”, meaning it is available free to the student. This, of course, is in line with the philosophy of the web where the basic product (be in search engines, social network sites or emails) are all given free to the consumer. The provider of such services then has to figure out how to recover their investments and make a profit.

In the traditional model of academics, it was the student who had to find the money to go to the prestigious university to learn a course. In the online world, it is now incumbent upon the university to develop and deliver the course online for free to the student. Naturally, the university need to find the money to sustain its efforts. Where will the money come from?

There are many business models for a new university. The most obvious one is that while the universities may continue to deliver the basic content free online, they could charge the students for examinations and the certification. This model is already practiced by edX and Udacity. Because of the scale of the MOOC enrolment, in a course taken by 50,000 students (a very reasonable number for online courses), even if 10% of the students decide to get a certification paying USD 100, it can still bring in half a million US dollars in revenue. CEO of Udacity has reported that the overheads for a course with 160,000 students are covered by charging USD

1 per student. While the traditional academic model takes lot of money from very few students, the new universities can survive by taking a little money from a large number of students. (Reference: MOOCs and the disruptive innovation, the challenge to HE Business Models).

Coursera has identified 7 more possible sources of income in addition to certification which is the only current revenue stream. The additional possibilities identified are:

1. Secure assessments (students pay to have their examinations invigilated, which increase credibility of online course certification)
2. Employee recruitment (companies pay to have access to students' performance records)
3. Applicant screening (employers/universities pay for access to records to screen applicants)
4. Human tutoring or assignment marking (for which students pay)
5. Selling the MOOC platform to enterprises to use their own training courses
6. Sponsorships (3rd party sponsors of courses)
7. Tuition fee

(Reference: Maturing of the MOOC)

However, the revenue stream opportunities do not stop there. Courses taught online could have a set of reference documents in it and publishers can then be provided limited time online access to those study materials and the revenue thus obtained can be shared with the course provider. One can also imagine a range of other academic and non academic products and services sold to the student community through the platform bringing in revenue which is shared with the online course provider.

2.4 Winners and Losers

Like any new disruptive technology, there will be both winners and losers created by the higher education revolution. The biggest losers will be the hundreds of universities around the world which do not figure anywhere on the world university ranking indices. Once courses from the top ranking universities are available, free of cost, to students anywhere in the world, there is very little incentive for any student anywhere to enrol themselves in an unknown local university. Internet has already redefined the famous rule from Jack Welch when he advised GE to be number 1, number 2 or get out of the market in any sector. In the brave new world of Facebook, there is no room even for number 2 and only number one will prevail. The question

we should ask is “will this theory be translated to academics as well?”, once learning goes massive, open and online. Which brands, of the existing universities will survive? The top 500, 100, 10 or even a lesser number ?

The answer seems obvious. When your option is to study a course free from any university in the world, why would you opt for the second best and why would an employer opt for a student who has chosen only the second best? So the arrival of MOOC will change the landscape of universities and in another ten years one can imagine that there would be no more than a handful of recognisable university brands in the world. Let us for the sake of understanding call this the “Facebook” university, as a reminder of how Facebook trounced competition even from the second best rival Orkut, supported by internet giant Google . A world in which only the top universities in engineering, medicine, law, music or commerce, will survive is very possible.

The Million Dollar Professors

In the current academic model every university offers similar courses and individual professors in all universities deliver the course to group of 50 or 100 students at a time. For example, foundation courses like geometrical drawing or engineering mathematics is being taught in every engineering university/college in the world. In India alone there are more than 3000 engineering colleges and hundreds of thousands of students who take this course every year. Assuming even 100 students per class, there are at least 1000, probably many times that, instructors teaching geometrical drawing alone. It is very easily conceivable that an outstanding professor in any of the universities in India, or outside, can put a fascinating series of lectures online and that will become the basic teaching material all over the country. While all the 1,000 teachers in India now get more or less the same wages, it is also very conceivable that this professor with world class pedagogical power will now be paid many times that by a company who arranges to sponsor his lecture and then charge a small fee from the hundreds of thousands of students who use his lectures.

A Million Teaching Shops

Once we take out the captive students from the current universities to global brands and follow the lectures from the “super” professors, the question arises as to what will the thousands of universities and hundreds of thousands of colleges will do in future.

There are two reasons why physical “universities” and “colleges” will not become redundant. Firstly, there are a set of subjects, such as engineering

and medicine, which need practical learning. Local engineering and medical schools can provide such facilities even when the curriculum is set and student achievement is evaluated by a global university. Secondly, the local institutions can become examination centres where integrity of the evaluation process can be verified by supervised evaluations. Thirdly, a majority of the students who study MOOCs will need to get some degree of tutorial support. This is similar to the tuition centres that mushroom around colleges. Local colleges can easily rebrand themselves as tutorial support centres for global universities.

A more important aspect will come from the non-academic aspects of university education. Universities were not only meant to be places where students learned academic topics but also where they developed their social and leadership skills. While some degree of networking skills can be learned online, the cultural aspect of growing up would mean that young people come together where they can chat, make friends, date and have fun. The physical space of the colleges and universities can still fulfil those services.

The current university set up will change in three ways in response to this transition. Firstly, there will be de-coupling from teaching and research. Traditionally, university professors conducted research, supervision and teaching concurrently and this will no more be needed as the high-end teaching gets taken over by the million-dollar professor and low-end tutoring by start-up lecturers. Research can be moved to research centres while teaching becomes tutoring. Secondly, the university space can become a centre for the microenterprise domain where individual tutors can deliver tutorial services. Such tutors need not be employed by the university as the “university” provides nothing but a physical space where the tutor and student can meet. Thirdly, students will be looking for maximum flexibility and better infrastructure in obtaining their tutorial support and therefore some degree of consolidation of the “teaching space” is inevitable. Successful “universities” in the third world, in future will be spaces that offer the maximum cultural experience to the students.

Re-birth of the Professional Bodies: Widespread acceptance of MOOC at an administrative level could bring back a more prominent role for professional bodies, such as in the institution of engineers or bar councils. Historically, professions such as engineering, law and medicine only accepted a new candidate into their profession after the members have been put through an entry process which included technical training, practical apprenticeship and explicit commitment to professional ethics. However,

mass production of engineers, doctors, lawyers and other professionals reduced the role of professional bodies to mere bystanders in professional education. A student could spend 4 years in an engineering college, obtain a degree in civil engineering and claim to be a civil engineer for life even though they have never undertaken any practical engineering at the entry to the profession of engineering or end of their careers. Professional bodies can once again set the entry criteria to professions which will include not only appropriate qualifications obtained through MOOC but also specify a duration of technical practice.

3.0 TNE and India

While the fancy lingo of TNE and MOOC may be new to India, the fundamental ideas behind it are not. India has already been practicing TNE even though there has not been any defined government policy on the same. Due to the massive size of the country and the university system not being able to service all students aspiring to receive higher education, many of the elements of TNE has already been in applied in a national context too. Table 5 shows the type of examples which are similar to TNE which has been in practice in India in both transnational and trans-state fashions.

What India lacks, therefore, is not experience in practicing TNE but a policy framework which allows the country to take advantage of the new TNE revolution sweeping the world. India is well positioned to lead this revolution for a number of reasons:

Table 5 Examples similar to TNE in India

TNE Element	Examples in India
Distance Learning	Indira Gandhi National Open University
Franchises	NIIT for computer education
Certification	Association of Chartered Accountants
Branch Campuses	AMU(Aligarh) Campus in Kerala MG University Campus in UAE
Online Learning	Amity University MBA Programme

Largest unmet demand for higher education in the world: India's population grows by about 20 million children per year. Assuming even 50 % of these children study up to tertiary level, we are looking at ten million students to be educated in colleges. While India has over 500 universities, a major portion of the Indian higher education happens within 30,000 colleges that are mostly affiliated to the state universities that have geographically defined catchment areas. The physical infrastructure, teaching quality and curriculum in these colleges leaves much to be desired. None of the state universities, to which these colleges are affiliated, is listed in any of the international university ranking systems. The employment market frequently complains that our graduates are not "employable". Even with all these constraints obtaining admission in one of these colleges is still very competitive due to the number of students seeking higher education. So there are many reasons average Indian students will move en-mass to the new world of possibilities offered by the TNE.

1. Availability of academic spaces as against severe competition in the geographically confined academic institutions
2. Possibility to study curriculum which are globally up-to-date
3. Receive training from globally rated content providers and professors
4. Opportunity to acquire combination of skills needed by the market as against the set menu of courses offered by the university

English Literacy: India now has the largest population of students who are able to absorb learning in the English language, the language in which most of the TNE products are being generated and distributed. We could leverage on this factor to create the largest market for TNE which can then be leveraged.

High Internet Penetration: While physical infrastructure in India is still lagging behind, the digital infrastructure has caught up and internet, which is the key change agent in TNE, has high penetration among the student groups who form the primary target of TNE.

Familiarity with Accreditation Systems: India already has a system by which residency is no longer a criteria for completing qualifying competitions. The National Open School has done this for school education for generations and this model can be easily expanded to the university level. Setting a curriculum for various courses, establishing an examination system for courses studied online (even from outside the country) and a bundling arrangement for award of degrees are all possible with only marginal extension of the existing policies.

4.0 TNE and Kerala

The state of Kerala in India is a place which has very high potential for converting the TNE into a huge opportunity for enhancing academic standards, improving employability, increasing classroom diversity and massive economic opportunity.

Kerala is optimally placed to take advantage of the TNE for the following reasons.

1. **High Aspiration and Mobility of the Population:** The Kerala economy is based on a model whereby individuals obtain basic education in the state only to migrate to other parts of the country (or world) to take up employment sending remittances back home. There is thus a demand for globally current qualification and already a number of global certifications, like safety or computer networking, which even when not nationally recognised are widely sought after. So the Malayalee youth will take up the opportunity to obtain globally recognised qualifications via TNE opportunities even if they are not nationally recognised.
2. A very vibrant private sector which has invested billions of dollars of its own funds to establish higher educational institutions and have developed business models which bring them sufficient return on investments. Once familiarised with the TNE landscape they will easily find away to penetrate the market serving a social good in the process.
3. Well established infrastructure (lecture halls, libraries, computer centres, housing facilities and other student activity centres), which, if efficiently used can teach hundreds of thousands of students per year, including offering of additional shifts if needed.
4. Higher education institutions see themselves as average “teaching shops” with no pretention of research or high quality institutions. So for them to become “franchisees” of a global brand is much less of an ego challenge than for the known national brands such as IITs or IIMs.
5. A good number of highly qualified academicians from Kerala who are currently working outside the state may be willing to repatriate if the financial incentives are adequate which could be achieved in an IBC context.

6. The state had a tradition of “parallel colleges” which supplemented the traditional education market when the supply side was restricted officially. A MOOC based training opportunity can instantly throw up hundreds of “MOOC” tuition centres in the state where retired teachers, part-time teachers and young graduates all take on the role as MOOC tutors.
7. Moderate climate, stable political atmosphere and one of the lowest crime rates in the world making student life secure for students from other states and countries.
8. Low cost of training and living, especially compared to that of alternative locations (Malaysia, Singapore, Dubai or Qatar) which are currently leading educational hubs in Asia Pacific.
9. High connectivity with the rest of the world, with three international airports with more than 20 flights per day connecting to destinations in the Middle East, South Asia and South East Asia.

The challenge, therefore, is to increase awareness about the fundamentals of TNE among all actors, especially students, parents and private sector providers so that the social momentum for policy change is built up. There is also a need for an effort within the government to create the correct policy regime and practical incentives to help the private sector and assure the students to move on to TNE and take advantage of the opportunities that have been created.

Bibliography

1. Innovating Pedagogy (2013), Exploring new forms of teaching, learning and assessment, to guide educators and policy makers. Open University, Innovation Report 2.
2. The Shape of Things to Come 2 (2013), The Evolution of Transnational Education, Research Highlights, British Council
3. Horizon Scanning (2013), What Will Higher Education Look Like in 2020? Observatory on Borderless Higher Education
4. The Maturing of the MOOC (2013), Literature Review of Massive Open Online Courses and Other Forms of Online Distance Learning, Department for Business Innovation and Skills
5. MOOCs and Disruptive Innovation, The Challenge to Higher Education Models (2012), The Observatory for Borderless Higher Education

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