



## D-TRANSFORM

*Un projet Erasmus +*

### **O1A3 – Open Educational Ressource, a lever for digital transition of higher education?**

Université de Lorraine (LORIA)

Nathalie TINGRY

Anne BOYER

Azim ROUSSANALY

Mars 2016





## TABLE DES MATIÈRES

|   |           |
|---|-----------|
| <b>D-TRANSFORM .....</b>  | <b>1</b>  |
| <b>1 INTRODUCTION.....</b>  | <b>4</b>  |
| <b>2 METHODOLOGY .....</b>  | <b>5</b>  |
| <b>3 FROM OPEN CONTENT TO OPEN EDUCATION .....</b>                      | <b>6</b>  |
| <b>3.1 The evolution of OER profile lines .....</b>                     | <b>9</b>  |
| <b>3.2 Mooc, trend or tidal wave?.....</b>                              | <b>10</b> |
| <b>3.3 New actors in the educational ecosystem .....</b>                | <b>15</b> |
| <b>3.4 From Mooc to Spoc, from open to contextualized .....</b>         | <b>17</b> |
| <b>4 CONTEXTUAL ELEMENTS OF THE STUDIED INSTITUTIONS .....</b>          | <b>18</b> |
| <b>4.1 Digital governance.....</b>                                      | <b>19</b> |
| <b>4.2 Digital services.....</b>  | <b>23</b> |
| <b>5 ACCESS TO KNOWLEDGE FOR ALL : MYTH OR REALITY ? .....</b>          | <b>25</b> |
| <b>5.1 Free digital resources in expansion .....</b>                    | <b>25</b> |
| <b>5.2 For an easier creation and use .....</b>                         | <b>27</b> |
| 5.2.1 From creation to modification of free educational resources ..... | 27        |
| 5.2.2 From indexation to management and dissemination tools .....       | 28        |
| 5.2.3 An assurance of quality, a tool for users' appropriation.....     | 30        |
| 5.2.4 From productive teacher to unifying project .....                 | 31        |
| <b>5.3 Contrasted results .....</b>                                     | <b>33</b> |
| 5.3.1 Broader and more diverse publics .....                            | 33        |
| 5.3.2 A largely graduate public.....                                    | 34        |





|          |   |           |
|----------|---|-----------|
| 5.3.3    | OER and MOOC support or obstacle to the supremacy of English .....  | 34        |
| 5.3.4    | The autodidact myth .....   | 35        |
| <b>6</b> | <b>OER : A LEVER FOR TRANSFORMATION OF HIGHER EDUCATION ? .....</b> | <b>36</b> |
| 6.1      | Learn with OER .....  | 36        |
| 6.2      | MOOC a vector for pedagogic innovation? .....                       | 38        |
| 6.3      | Opening up to the world through OER .....                           | 39        |
| 6.4      | Rising economic models .....  | 41        |
| 6.5      | To be or not to be open .....                                       | 43        |
| 6.6      | Teachers still not convinced .....                                  | 44        |
| <b>7</b> | <b>CONCLUSION .....</b>   | <b>46</b> |
| <b>8</b> | <b>APPENDIX- QUESTIONNAIRE .....</b>                                | <b>50</b> |
| <b>9</b> | <b>BIBLIOGRAPHY .....</b>   | <b>51</b> |





# 1 INTRODUCTION

Easy access to educational content for the largest number is deeply rooted in our European history. The question of freely available digital open educational resources (OER) has nonetheless been a particular point of focus in the last ten years for various countries and also for international institutions, particularly in Europe. The production and diffusion of these resources have taken different aspects. They have either taken the form of “reservoirs” of educational resources whose location and access need to be facilitated, or the form of structured and rhythmized training modules comprised of classes, exercises, discussion forums, and evaluations, as is the case with on line education programmes and Mooc.

Whatever the form, two principles underlie this process: education for all as it is defended by UNESCO and “free”, “open”, “collaborative”, “coproduction” practices etc. carried by the web world for the sake of greater agility and global efficiency.

The media have reflected some great successes, even presenting Mooc as “the” lever for a radical transformation of educational patterns and for a better universal access to knowledge. Firm recommendations have been edicted at national and international level, efforts to mutualise actions have been launched, OER are now included in the field of digital public policies (cf. O1.A1).

Has this mobilization around OER borne fruit in terms of a wider access to knowledge for all? Facing a dual trend of commoditisation and opening up of education at world level, are OER an instrument of domination or a tool of equal opportunities and diversity? Is the trend towards sharing maximum resources or rather towards a contextualized and private usage?

Furthermore, will the development of OER lead to an innovation and a transformation of our educational systems linked with the digital evolution of our economy, our society and our culture?

What place should it consequently be given to mobilize and educate “leaders” of our systems and institutions?

The objective of this report is to answer these questions, focussing on two main areas:





- the first area will concern *open education* confronting the ideals of this concept with reality
- the second area will question observations and perspectives in terms of evolution of higher education and the role played by OER.

The conclusion will focus on the object of the D-Transform Project, in other words, the mobilization of the governance of institutions.

In order to give context to these issues, the present report will start with a reminder of historic and geographic perspectives related to OER and Mooc before providing a general background in terms of digital governance and digital services offered to teachers and students in the various studied institutions studied.

## 2 METHODOLOGY

To answer these questions, we chose to lead a qualitative study with a few institutions representative of higher education in France, the United Kingdom, Italy and Spain and we compared and completed the results with the field's literature.

The objective of the qualitative study within the D-Transform project is to harvest empirical data and for this purpose, we asked fourteen universities to complete a questionnaire. Universities were selected for being representative of the diversity and the heterogeneity of their country's higher education: open U or traditional universities, with or without a brand name, small or large institutions, mono or multi disciplinary.

The questionnaire includes eleven semi-directed questions ranging from institutions governance to digital uses<sup>1</sup>. The questionnaire was conceived by the University of Lorraine and validated by all of the project's partners. It was tested on the vice presidency of the University of Lorraine early May 2015, then transmitted on line to the digital technology vice presidents, vice rectors, digital department directors or IT services directors of the selected institutions. Data processing was handled anonymously, institutions preferring not to be

---

<sup>1</sup> See attached questionnaire







identified allowing for more freedom in their answers. In some cases interviews were organised to examine certain answers.

The study of data was then completed by a review of literature either formal (Ministry reports, OECD European Commission, press articles or conferences) or informal on various focal points seen in the questionnaire. The study's objectives are to check whether OER are used by institutions as a promotion tool for improving the quality of education or as re-mediation towards students. This exploration is done as part of a wider framework, questioning digital governance, the measures in place to assist students and teachers with digital usage, the place of educational resources, especially when they are free of charge, in these institutions.

In this report, the words “open educational resource” “open education” MOOC (Massive Open Online Course) and SPOC (Small Private Online Course) mean the following:

**Open Educational Resource (OER):** educational material available to a users community for consultation, use and adaptation, thanks to information and communication technologies with non-commercial purposes.

**Open Education:** way of teaching, open to all, using information and communication techniques to offer modes of learning and access roads to formal and non formal education (IPTTS 2015)

**MOOC:** On line courses conceived for a large number of users, accessible to all from anywhere with an Internet connection, open with no specific qualification and offering a complete, free of charge on line course experience.

**SPOC:** Small Private group on line courses.

### 3 FROM OPEN CONTENT TO OPEN EDUCATION

The notion of “open educational resource” as defined by Unesco, meant as a free and accessible educational content, referring primarily to the issue of education for all.





Without returning to the analysis of political conditions of the emerging notion of education open to all (cf. Part 01.A1) we keep in mind that it goes hand in hand with the rise of democracy and the affirmation of principles of equality. As early as 1794 in France, the notion of knowledge accessible to the greatest number was heard, with the Conservatoire des Arts et Métiers contributing to “dispelling ignorance ... increasing the amount of knowledge and knowers”. The right to education will be reasserted in 1946 in the Preamble of the Constitution of the IVth Republic: “The nation guarantees equal access to education both to the child and the adult” (Art 13).

After the Second World War, many similar initiatives were launched at international and national level (cf Part 016A1). In response to the atrocities of the Second World War, the question of dignity meets with that of equality, justifying the development of “education for all” and free access to educational contents. In its preamble, the Unesco act of constitution states that “human dignity demands the wide diffusion of culture and education for all, for justice, liberty and peace, these are sacred duty all nations must fulfil.”

As was shown by several authors (Perriault (1997), Thibault (2007)), the shift from the question of education to that of educational resources follows the development of mass media such as radio, television and the web. Large promoting schemes for the production and the diffusion of educational content start at the end of the 40’s with Radio Sorbonne<sup>2</sup> or the BBC educational programmes.

In terms of educational resources, the Internet, as much as the preceding media, is an opportunity to introduce new notions often already in discussion in older studies. As an example, in the 90’s, Hodgins<sup>3</sup> was identifying “learning objects”. He was reviving the idea of producing autonomous “small units” easy to re-use in many education and learning situations. This is how, in the middle of the 2000’s, France went from a policy of “digital campuses” centred around on line courses organised by the establishments collectives, to a national policy for the promotion of “digital educational resources” usable by all (cf Partie 01.A1).

---

<sup>2</sup> Autonomous educational programme created in 1947 with the Sorbonne’s lectures in Paris on Medium waves of French radiobroadcasting.

<sup>3</sup> The term « learning objects » was made popular by Wayne Hodgins in 1994, following the creation of a task force called “*Learning Architectures, APIs and Learning Objects*”.





If every media revolution reproduces existing phenomena, each one brings an amount of specificities and new elements along with them. The “digital society” imagined by the creators of information technology (Flichy, 2001) puts forward two objectives, new markets and “freedom” of access.

At the end of the 90’s, with the explosion of the speculative bubble affecting IT and telecommunication sectors, new open content licences appear<sup>4</sup>. Wiley<sup>5</sup> (1998) takes up the notion of open education combining it with open source<sup>6</sup>. He published his own open license educational resources on the Internet, which implies that the resource could be freely used, transformed and shared. Open education was facilitated by the introduction of technology sharing linked to the storage space accessible via Internet and integrating open source.

This environment will see the first fully dedicated educational resources platforms emerge.

In 2001, MIT announce that a large part of its courses will be put on line “free of charge” and “reusable by others”. The shared content goes from the mere syllabus to videos of classes. The Open Courseware<sup>7</sup> project is a media success and other famous universities will quickly join them to form the OpenCourseWare Consortium<sup>8</sup>, allowing for a rapid increase in the amount of available open and free of charge university courses through the Internet.

The simple availability of educational resources has largely evolved since the start. The arrival of the Internet allowed for a reduction of limitation to access and opened up a new access to resources anywhere, anytime the only condition being an available network.

---

<sup>4</sup> Free diffusion license allowing the user to copy or alter.

<sup>5</sup> Teacher at the Brigham Young University

<sup>6</sup> Open source does not only mean access to source code it also must include the possibilities of free redistribution and creation of derivative works

<sup>7</sup> The Open CourseWare project aims at putting on line free university courses. A selection of OER organised in courses modules

<sup>8</sup> <http://www.oecconsortium.org/>





### 3.1 The evolution of OER profile lines

The popularity for “free” courses, mediated by “famous” universities, raised the question, in 2002, of the impact of free courses in higher education and more specifically that of developing countries, where the demand for educational resources increases rapidly. The same year, during the first Unesco forum on free educational resources, the term “Open Educational Resource” (OER) will be created. Defined as “material for education, training and research on any supports, digital or not, that exist in the public field or published under open license allowing for the free access, use, adaptation and sharing with no or very limited restrictions. Open licenses are based on the framework of the intellectual property law as defined by the international conventions and respect the authorship of the work.” (Unesco, 2002).

With the objective of circulation of knowledge and within the framework of intellectual property law, a non-profit organisation created several licenses called Creative Commons, dealing with the conditions of use and / or distribution of work (December 2002).

In 2005, the OECD will suggest a conceptual scheme for OER, defining three large areas: free tools and software allowing for the creation of resources (1), educational resources (2), tools allowing for the use and diffusion of these resources (3).

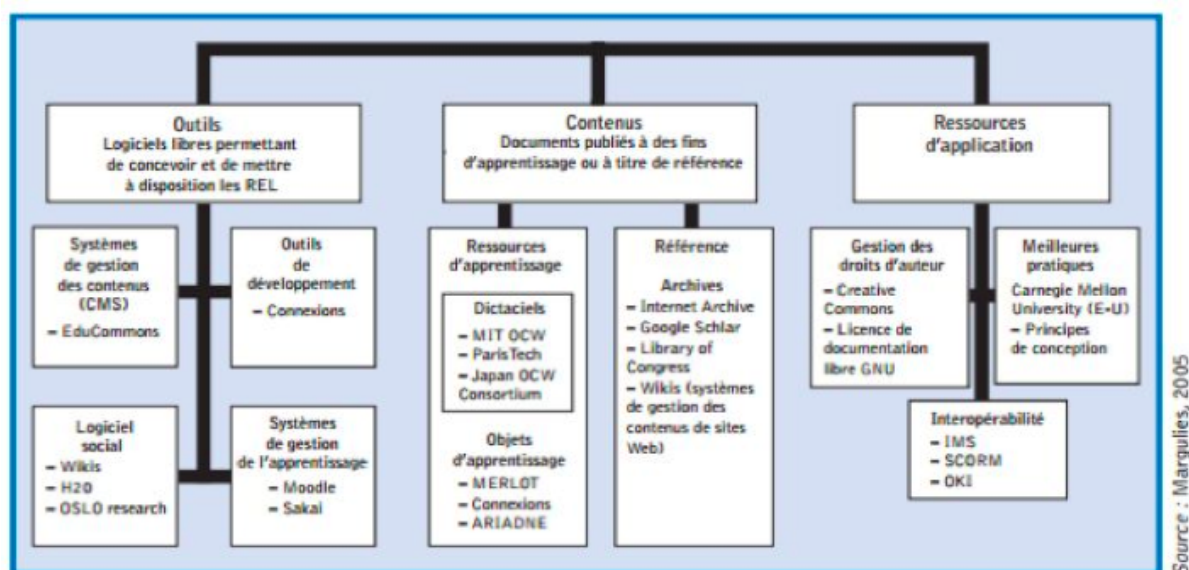


Figure 1 OER conceptual scheme (OECD, 2007)



OER are therefore either “educational learning and research resources emanating from the public domain or those made accessible, in the framework of intellectual property licenses, allowing for their free use and adaptation.” (Hewlett Foundation, 2002) or “educational resources made freely available for teachers and learners without the need to pay for copyright or royalties.” (Butcher, 2010 in Unesco, 2010).

The recent emergence of Mooc appears as the latest step of a path leading from paper to digital technology, from chargeable to free of charge, from content to animated and interactive dimensional resources.

The issue however is to establish whether Mooc can be considered as OER. In educational terms, there are two aspects to the word “free”, free as in free for the application of learners and free as in open content with the possibility to design one’s own programme (Daniel, 2013)<sup>9</sup>. More specifically in Home (2015) three different aspects are defined: 1) free access with no limits 2) recovery, re use, remix, re work and redistribution, 3) free of charge or with limited cost. European institutions participating in the survey presented in Home (2015) support the opening of Mooc in terms of accessibility, license, and free of charge access. In spite of the fact that the constituent elements are not in the great majority of cases free and reusable resources, this implicitly includes Mooc in the OER movement. To consider the specificity of the Mooc, we will continue to differentiate them in the current document.

### 3.2 Mooc, trend or tidal wave?

Information overload, sometimes called “infobesity”, will push Siemens to react in 2005 starting from the assumption that the learner is no longer in a position to memorise information, which has become too extensive, not even to understand it all, insisting on the capacity to find and apply knowledge, when and where it is considered necessary. Unesco is committed to this change in social and educational paradigm. “Seen that way, the learning process makes the teacher a guide, a coach in the learning process rather than an authority dictating a codified knowledge that the learner can only assimilate” (Unesco, 2005, p.838)<sup>10</sup>.

<sup>9</sup> E-learning days Conference in 2013 Sir John Daniel Speech (France-Lyon les 27 et 28 juin 2013).

<sup>10</sup> In “Distance education in universities of Quebec : a potential to be optimized” Superior council of Education p10 June 2015.





Simultaneously, a new educational trend will appear called “connectivism” (2005) based on collaborative work and the co-construction of knowledge. One has to wait until 2008, to follow the first course based on collaborative training given by Siemens and Downes<sup>11</sup> entitled *Connectivism and Connective Knowledge*. This course is inspired by Illich’s philosophy (1973) “a schoolless society”, presented to some twenty students of the campus of Athabasca University in Canada. This is followed by 2300 free of charge on line participants. The first Mooc (Massive Online Open Course) was born<sup>12</sup>. The free of charge principle will be what will make MOOC so popular.

A few years later, in 2011, Stanford university, then placed second in the Shanghai Ranking, makes an experimental course on artificial intelligence accessible, it will rocket to the top of applications (nearly 150 000). This success will see Stanford teacher Sebastian Thrun leave the university to create his start-up as well as the first private MOOC hosting platform (Udacity) focussed on Information Technology in February 2012.

Existing education platforms, such as Moodles, could no longer cope with such a large amount of students for the same course. The shift to high performance industrial scale platforms will make a great change and Udacity, closely followed by Coursera, also created by Stanford teachers, in partnership with other institutions. Their strategy will soon place them as market leader on the Mooc platforms.

Coursera and Udacity will adopt two different editorial strategies. Coursera will create partnerships with prestigious universities and let them develop their own educational contents with no quality control, allowing for rapid and massive development, whereas Udacity opted for keeping their own editorial line, guaranteeing production and property of their contents. Udacity proposes on-going open courses, whilst Coursera’s courses have a limited duration with an identified beginning and end.

Lastly a third platform (*EdX*) born from the association between Mit and Harvard (coming respectively third and first in the 2011 Shanghai Ranking) will come soon afterwards, focussed on information technology and scientific disciplines. It completes the platform landscape being the only one whose code is in open source. This code will later be used by

---

<sup>11</sup> In 2008 Stephen Downes sits at the Canada National Research Council

<sup>12</sup> Massive online open courses or CLOM in French





the French platform FUN-Mooc (France Université Numérique). The common point of these various platforms is a charge free access for the learner, only the time differ in the resource's access.

Although the acronym was created in 2008, the term Mooc only became public knowledge in 2012 as being a major “educational innovation”. Certain will even call it an “educational revolution”, 2012 will be qualified year of the Mooc by The New York Times<sup>13</sup>. Free access to sought after universities with very high tuition fees will change education perspectives and lets us think that a new world knowledge economy is born. However, if application is free, the certification is chargeable and remains different from the traditional graduation. In any event, Mooc will allow for institutions to change their image, broaden their learners base and enrich the innovation possibilities in the field of education facilities.

In an uncertain context various strategies will be adopted : selecting the best world institutions for Coursera; focussing on education for the needs of the economic world for Udacity; broad base and quality for edX. Visibility and attractivity, quality, certification or not, opening up of classic curriculum, hybridation... Each tries to anticipate and position on a digital education market in full evolution and a general context of increasing amounts of learners in higher education throughout the world.

After 2012, the Mooc and platforms creation movement got stronger in Europe. Institutions invested in spite of lacking an economic model supported by institutions consortia (Futurelearn in the United Kingdom) or a national policy (France Université Numérique in France). One can consider that the flexibility offered by MOOC meets with today's learners' needs, allowing for the development of competences, improving the transfer of knowledge, increasing the rhythm of innovation for life long training and opening to better social mobility (Porto declaration, 2014).

The United Kingdom has therefore encouraged the creation of a private course platform in September 2013, owned by the Open University<sup>14</sup>. This university is a pioneer in the use of Internet and brings a British answer to the subject of the MOOC with Futurelearn whilst at the same time an increase in tuition fees is taking place in British universities. The 75 partners in

---

<sup>13</sup> 2<sup>nd</sup> November 2012.

<sup>14</sup> Online education specialist in England for 40 years and pioneer in opening access to education.





Futurelearn are British and international universities celebrated for teaching and research, specialised organisations such as the British Council, British Library, British museum, National Film School, or the BBC as well as internationally acclaimed university centers of excellence recognized for their expertise in a special domain such as the Graduate School of Medicine, the University of Wollongong or the research center for digital media, Queensland university of technology. The most prestigious universities such as Oxford, Cambridge or Imperial College, however, did not join the platform on its creation. Oxford considering the Mooc approach as the “antithesis” of their vision of educational excellency (Mapstone 2014)<sup>15</sup>, whereas Cambridge remain very prudent on the subject while pointing out they already shared their conferences on line.

In France, a national platform called FUN-Mooc<sup>16</sup> (France Université Numérique) will be launched in October 2013 by the Ministry of Higher Education and Research to support Mooc’s production, diffusion and visibility. A technical platform was created based on large national operators in services and infrastructure, a quality chart was disseminated, a network action plan put together and training organised.

Initially aided functionally and financially by the state, the FUN-Mooc platform has, since August 2015, been supported by an institution pool in the form of a GIP<sup>17</sup>. The objective is now to set up an economic model, invest in services (particularly supporting SPOC<sup>18</sup>, and targeted training integrated in the curriculum of initial or continuous training for universities or companies), to work for the development of certification, and to be a reference point for the French-speaking world.

In spite of the economic crises, deep cuts in education budget and a wave of privatisations, Spain will also be committed to promote free educational resources in Spanish and Portuguese. The project of a national platform will be the fruit of this determination and will be initiated in January 2013. MiriadaX will be developed with the support of private companies (Santander Bank, Telefonica) and the wide university network Universia will have, as its objective, to open and encourage the diffusion of knowledge in higher education

---

<sup>15</sup> Sally Mapstone declaration on the Oxford University website

<sup>16</sup> <http://www.france-universite-numerique-mooc.fr>

<sup>17</sup> Public Interest Grouping

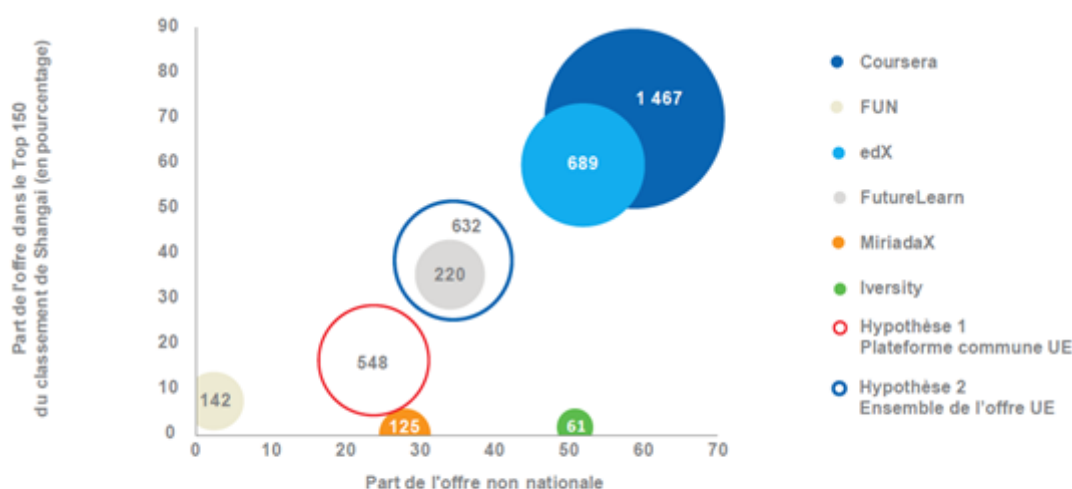
<sup>18</sup> Small Private Online Courses





in Spanish and Portuguese within the Iberic American space. 39 university institutions propose Mooc on MiriadaX<sup>19</sup> amongst which 13 are in Central and South America (Thot Cursus, 2014). The national platform will not prevent other initiatives and, for example, an institution with a long experience such as UNED (Universidad Nacional de Educacion a Distancia) will set up their own platform with some 100 training courses.

In the international competition for Mooc, national European platforms have less immediate appeal to organisms with a brand or an established know how, with the counter example of Open U. Whereas American platforms attract the most prestigious institutions<sup>20</sup> (over 70% of the MOOC hosted by Coursera and 60% of courses available on edX are made by universities ranked in the top 150), European platforms attract very few prestigious institutions with the exception of Pierre et Marie Curie for FUN or the University College of London for Futurelearn (see above chart from France-Stratégie, 2016).



Champ : l'ensemble des MOOC terminés, en cours ou programmés.  
Lecture : la plateforme Coursera héberge 1 467 MOOC, dont 70,1 % sont produits par des établissements dans le Top 150 du classement de Shanghai de 2015 et 58,8 % sont issus d'établissements autres qu'américains.

Source : Coursera, edX, Iversity, FUN, MiriadaX, FutureLearn (consultation octobre 2015). Calculs : France Stratégie

Figure 2 geographic diversity and fame of major platforms' institutional partners

Attracting prestigious partners should be one of the objectives for European platforms (the Coursera offer is made of over 59% of non-American universities among which 14%

<sup>19</sup> <http://miriadax.net>

<sup>20</sup> According to the Shanghai ranking



European universities. It includes over 100 MOOC from European institutions ranked in the Top 150 or 8% of the offer.)

Other shared platforms do not stem from national initiatives. In Spain the platform Tutellus is set up in 2011. Most courses come from the 23 Spanish universities present on the platform such as Madrid Polytechnic University (UPM) with 56 courses, followed by Vigo University (UVIGO) with 31 courses and Cartagena Polytechnic university (UPCT) with 23 courses (Oliver et al 2014).

To assert European values and knowhow in terms of on line higher education and to reinforce the European offer in response to the Anglo Saxon, and more specifically American momentum, a pan European Mooc initiative was launched mainly based on open universities and in partnership with the European Commission. The initiative is steered by the EADTU (European Association for Distance Education Universities). To gather the maximum partners and speed up the process, OpenupEd<sup>21</sup> will take the form of a platform aggregator without advising on the choice of a unique platform, allowing each one to produce in their own language.

This initiative will be included in a wider context of open educational programs. The European Commission launches in September 2013, as part of Erasmus + an Open education Europa<sup>22</sup> portal allowing for the sharing of free education resources and for the stimulation of innovation and digital competences in schools and universities.

### 3.3 New actors in the educational ecosystem

Supported by the new potential in digital technology, non-institutional initiatives appear with resounding success.

The Khan Academy<sup>23</sup> was thus founded in 2006, as a non profit organisation, with the objective to create “the first world wide free virtual school” with free learning tutorials.

---

<sup>21</sup> <http://www.openuped.eu/>

<sup>22</sup> <http://www.openeducationeuropa.eu/>

<sup>23</sup> [www.khanacademy.org](http://www.khanacademy.org)





Studies carried out in the United States by the Bill and Melinda Foundation, the Library without Borders<sup>24</sup> and the Orange Foundation<sup>25</sup> on the Khan Academy put forward the positive effect of these resources specially in the improvement of the level of students experiencing the most difficulties. Their use by institutions is linked to the integration possibilities within national education curricula.

In France, a site to assist programming (Le site du zéro) well known by students and on line since 1999, has seen its audience rate increase with the arrival of Mooc. In 2012, the company launched CLAIRE (*Community Learning through Adaptive and Interactive Resources for Education*) in partnership with the LIRIS<sup>26</sup> and the INRIA<sup>27</sup> in Grenoble, an open source project of content management allowing for the writing, improving and disseminating educational content for teachers companies and Open source developers. Renamed Openclassroom, and transformed into a platform in 2012, they launch the first tailor made courses in 2014, with currently over 1 600 000 registrants and offering more than 1000 free on line courses (January 2016 data). The first e-education site in Europe with over 3 million users every month, Openclassrooms now offer their courses to companies and provides a paying service (certification on success, small group work or individual coaching to obtain a state recognized certificate.)

These two examples are emblematic of the balance sought after between showing humanistic values and looking for a viable economic model. Whilst the Kahn Academy displays humanistic ambitions (in the American context where quality education is essentially private and expensive), Openclassrooms is a private company developing an economic model around free contents and paying education services (in France where university is free of charge). These pragmatic and flexible organisms, once established in the world of education create win win partnerships with institutions to broaden their field of action and strengthen their legitimacy.

---

<sup>24</sup> [http://www.bibliosansfrontieres.org/index.php?option=com\\_k2&view=item&id=398:khan-france-monde-francophone](http://www.bibliosansfrontieres.org/index.php?option=com_k2&view=item&id=398:khan-france-monde-francophone)

<sup>25</sup> [http://www.orange.com/fr/content/download/24976/569122/version/4/file/CP\\_LancementSept2014.pdf](http://www.orange.com/fr/content/download/24976/569122/version/4/file/CP_LancementSept2014.pdf)

<sup>26</sup> Laboratoire d'InfoRmatique en Image et Systèmes d'information (LIRIS).

<sup>27</sup> Institut national de recherche en informatique et en automatique (INRIA).





### 3.4 From Mooc to Spoc, from open to contextualized

Mooc, as first drafted by Siemens in 2008, has changed with the emergence of platforms offering educational resources in an order defined by the teacher, who sets the objectives and accompanies the learner with interaction with their peers and experts. Following these educational evolutions, Siemens offers in 2012, two new alternatives, the connectivist cMooc where users participate in the making of the course and xMooc transmitting a more classical form of knowledge, focussed on resources put on line by the teaching teams. These Mooc aim more specifically at mass education developed by famous American universities such as Harvard or Stanford (Downes 2011; Karsenti, 2014). Udacity call the Xmooc “An advanced course” aiming at a specific target. For (Siemens, 2005), “if Mooc are not based on OpenCourseWare, they will soon become an “enclosed space” and this will mean a regression with regards to the progress made recently.” In the wake of Siemens position, certain authors including (Paquette 2014) consider the Spoc, the latest educational and economic adaptation of the Mooc, as a step back for *open education*. Whereas Mooc are open to a large number whatever the age and profile of the learner, Spoc are limited to a small group of targeted learners, the size of a classroom, thus allowing for better guidance and delivery of a degree. The course is no longer open but closed, and therefore loses its denomination of free resource (Paquette, 2014). On one hand Spoc are an answer to the large dropout rate in Mooc and, on the other, a need for stronger contextualization in learning. They are part of a general evolution seeing the link between platforms and the professional world getting stronger. Contents and services offers are made to companies and training organizations for job seekers.

Iversity<sup>28</sup>, a learning platform launched in 2013 in Germany by a start-up, allowing for universities and non-profit organisations to share courses with worldwide participants, will widen its scope in 2015 with a paying offer to companies and individuals with “Iversity PRO”. This is following the general trend in America and Europe for the coexistence of several types of offer.

---

<sup>28</sup> <http://iversity.org>





In this way, last April, the company OpenClassrooms made the headlines with the announcement by President François Hollande of a free access to the premium platform (access to MOOC, e-books, unlimited tutoring and certification) from September 2015, for jobseekers in France. The government hopes to ease and multiply professional reconversion and the upgrading of competences to better meet with the job demands in certain sectors.

Coursera adapt their economic model from September 2016, and propose on application the choice between the “reading only” mode, free of charge and giving access only to content, and a paying “interactive” mode (course work correction). However, to maintain the values “open for all”, sought after from the start, Coursera announce that financial help will be offered to learners experiencing difficulties.

We observe the diversification of the offer for on line education, with various degrees of opening, objectives and educational models. It is clear that we are experiencing a momentum of innovation both in terms of education models and in the creation of value.

In an ever more globalised environment, European universities endeavour to combine the widest possible access to education (OCDE, 2002) and the race to excellency to attract the best talents. OER and MOOC both have their place in this double perspective. With their diversity, they address to both a wide and specialised public and provide refresher courses, state of the art competence, acquisition or reconversion. They can contribute to the rationalisation of the training offer made easier by closer ties and mergers and made necessary by the public funding rarefaction.

## **4 CONTEXTUAL ELEMENTS OF THE STUDIED INSTITUTIONS**

The analysis of the data collected in 2015 in the D-Transform project, with 14 institutions from four studied countries (France, Spain, Italy and Great Britain), fostered two points of focus helping contextualize the digital transformation of the studied educational institutions: implementing a digital governance and the services offered to teachers and students.







## 4.1 Digital governance

Even if digital development strategies are not homogeneous in terms of actions and implementation in the interrogated European universities, there is a momentum for digital development and specifically on line education. Strategies are put together at university or national institution level. Dedicated staff are specifically in charge of steering digital issues. Governance awareness and mobilization still needs to be raised to meet the challenge of global digital transition in universities, specifically in terms of transformation of the educational mode. In 2014, nearly half of the institutions set up a general strategy on digital technology and 25% are still in the process. However university strategies concerning on line education are still not frequent in Europe (EUA, 2014). A strong trend is however building towards institutional e-learning strategies (EU, 2015).

In France, the state is an important actor in the process of university change. A contractualisation and accreditation procedure links the ministry to the establishments and, as of now, to the grouping of establishments or Comue<sup>29</sup>. The 2013 law on higher education has explicitly planned for a vice president for digital affairs by Comue. All establishments questioned in our survey report to have a digital strategy, led by a digital vice president, a digital president or a director for information systems, seconded by a project manager (this in most cases will be a teacher-researcher).

A certain amount of common tools have been reported such as the implementation of a digital organisation, described by a digital directing scheme (SDN), the creation of services dedicated to digital education and the tutoring for the creation of resources and training projects. The missions are principally the engineering of education, and coaching for the production of digital resources and the tutoring for calls for educational and digital project. The amount of people (administrative or technical staff) committed to these services varies according to the size of the establishment but can exceed 20 people.

However we noted a lack of evaluation of digital strategies within the studied establishments although most of the time indicators and scoreboards are available. There is no or hardly any

---

<sup>29</sup> COMmunautés d'Universités et d'Etablissements.





analysis done on an annual basis by these establishments and to the best of our knowledge no documents has been published on these elements so far.

The United Kingdom relies on a decentralised governance and a private education system that has seen significant expansion taking it closer to the American model (cf. Part 01.A1). The United Kingdom gathers four distinct regional education systems: England, Scotland, Wales and Northern Ireland. The responsibility is delegated to individual parliaments or national assemblies. Every nation has a ministry or department for Education (and sometimes more<sup>30</sup>) plus a few common development or reglementary organisms often with important local autonomy such as Assurance Quality Agency for higher education (AQA) the Joint Information Systems Committee (JISC) or the Higher Education Academy (HEA). Although the government in the United Kingdom is a significant financial backer through Funding Councils and Research Councils, universities have much more autonomy than many other countries, particularly in terms of delivering degrees.

For instance from 2010 in Scotland digital education was integrated as a priority of the strategic plan of surveyed universities at a time when an increase in tuitions fees<sup>31</sup> was announced in Scotland for other students from the United Kingdom and EU as well as strong cuts in the financing of university investment projects (Capital Projects), (Worton, 2012). Beyond this economic situation, the strategic objective of the digital education is to develop learning and evaluation methods of teaching and put forward on line programmes that can be a lever for the development even beyond the region. This approach aims at exploiting the potential of emerging technologies as an academic support, continues to develop the environment of virtual learning and allows for integrated e-learning (on line courses available for campus students available with their application together with face-to-face courses). A fair amount of actions have been launched to allow for surveyed universities to elaborate an e-learning strategy as the creation of Mooc, financing the development of on line courses, the creation of dedicated services and the implementation of additional support resources.

---

<sup>30</sup> <http://www.europe-et-formation.eu/royaume-uni.html?>

<sup>31</sup> 31 9000£ a year





Partnerships with Futurelearn also emerged for developing MOOC within the four nations as well as with the OER Universitas<sup>32</sup> for England and Northern Ireland allowing for an internationalisation of existing programs.

The development of an e-learning strategy within surveyed establishments induced an increase in the central services workforce, in particular with new jobs as education engineer and media production. The support for the creation of contents for digital courses as well as the use of technologies has become a priority. The role of coordinator for training appeared (2012, in Scotland) as well as the creation of “on line training centers” with executive staff with the responsibility of developing distance education. In Northern Ireland an Education Development Unit (EDU) in charge of elaborating on line documents, to offer more on line material and programs to support the regional mission, was created.

In Italy, surveyed universities (2) had undertaken specific action for the development of on line education in the late 90s. Education platforms (Moodle, Liferay or owner platform) will appear with the objective to support teaching and training. After the dematerialisation of the administrative processes for students (at the beginning of the 2000's), new specific services are devoted to teaching and innovation and digital communication<sup>33</sup> training given as a support for digital communication (from 2012). Although there were delegates committed to information technology, changes in governance at the head of establishments made new directions possible in favour of on line education with as a primary objective being mixed<sup>34</sup> training and Mooc.

Even if the digital strategy seems to be a priority for the whole of the surveyed establishments with a perception of digital education challenges, there has been very little in terms of the creation of management and use policy for free educational resources. The overall result of the survey is that there is no production strategy in establishments nor effective incentives for the use of OER (teachers and students) as OER are not amongst universities priorities.

---

<sup>32</sup> Collaboration of post secondary education establishments in the objective to provide opportunities to learn with OER and get credits at a lesser costs than with traditional education . The conceptual framework underlying the OER Universitas is a structure created for students usually exclude from traditional higher education wishing to commit in a free apprenticeship whilst having an official accreditation with the participating universities. [https://en.wikipedia.org/wiki/OER\\_Universitas](https://en.wikipedia.org/wiki/OER_Universitas)

<sup>33</sup> Example : Servizio Innovazione e Comunicazione digitale. <Http://kiro2014.unipv.it/idcd/>

<sup>34</sup> Both distant and face to face





Differences are to be noted within establishments used to on line education where the production of resources is inherent to teachers activities. Outside of this frame, there are still many teachers who are not open to OER, certain thinking that the dissemination of their resource would end up in their impoverishment. The issue of copyrights is, however, currently under specific study to meet with the increasing demands for open courses. In terms of resources, universities are unequally engaged in the mutualisation procedure.

In France, initially with the Thematical Digital Universities (UNT), and then in 2013, the creation of the national platform FUN-Mooc, were vectors for it. The drive (specially financially) in OER is mainly guaranteed by the state, European projects or more locally by regional partners.

In the United Kingdom institutions with experience in the development of e-learning training have a digital education resource production strategy that includes the strengthening of dedicated development teams. Strategies include financing, resource ownership and the incentive to publish in *Creative Commons*. Part of the financing has currently been made available for the development of Mooc.

Les stratégies de développement comprennent le financement, la propriété des matériaux et l'encouragement de publier en *Creative Commons*. Actuellement une partie du financement a été mis à la disposition du développement des Mooc.

In Ireland, surveyed institutions own the rights of resources put on line by lecturers but chose not to use this right so as not to block the production process. Teachers have the choice to transfer their resources to their fellow teachers or not. In practice most teachers transfer their resources.

Surveyed establishments in Italy have no defined production policy nor education resource diffusion and the issue of copyrights is still being dealt with, whilst certain establishments manage intellectual property related to digital educational resources the same way they do other original works from their staff.

In Spain, same observation regarding the lack of commitment from governances towards OER production, even if the announced objective is the increase in the OER benchmarking.

Italy, Spain, United Kingdom and France have all been approaching on line education for a long period of time. Only France does not have an Open U. However, in Italy, the opinion





about the UniTelematiche is quite controversial. For twenty years, France carried out a national development OER policy, on line education and more recently Mooc through various initiatives such as “digital campuses”, thematic digital universities or the FUN Mooc platform. The concept is to lead all higher education establishments in the same momentum of transformation via digital technology in a concern for territorial equity and shared modernisation. United Kingdom’s education includes both private and public systems, with high tuition fees. On line education as in the United States, may become another source of financing. L’Open U has, for many years, acquired extensive experience in the field of online education.

Spain, France and the United Kingdom have a certain activity in the field of Mooc (IPTs, 2015) but this is still a small percentage of the overall activity of distant education.

## 4.2 Digital services

In most surveyed higher education establishments, services for students have developed relying on digital work environments: email accounts, wifi connections, computer rooms, libraries and learning centers, catalogues for on line courses and the social media. At the beginning of the academic year, students benefit from training in the use of the platform or digital tools, coaching, and tutorials. In Spain the strengthening of the supporting teams for the “training digital space” is organised at the beginning of the academic year. To accompany students, tutorials take place and campus presentation sessions are set up. In general terms, there is little feedback on this training. Certification on digital competence is proposed such as in France, the Computer and Internet Certificate (C2I) the standards of which regularly evolve and for whom MOOC are proposed at a national level.

Italy very soon implemented administrative dematerialisation procedures for students such as the application for exam sessions. Platforms (mainly Moodle) allow the students access to preparatory courses including the description of courses, on line course organisation, training resources and the interaction with teachers.

Students are more and more committed to the development of the digital momentum in establishments. Thus in the United Kingdom (Scotland) certain establishments have a Student Representative Council (SRC) deeply committed to various development activities whose aim







is to accompany change and improve the “student experience”. This council allows students to share their technological experiences with the staff, as well as improving their university career through the use digital technologies.

In France, a welcome day is organised for students and teachers on their arrival. Focussing especially on available digital services, on their rights and obligations, and which are sometimes formalised in a computer chart. Training on digital tools for education (plagiarized material, education platform...) is offered to teachers in most cases along with conception and dissemination of contents, sometimes with the help of external companies. Accompaniment and assistance are proposed by dedicated services to students (individually or through calls for projects). Locally, feedback sessions are organised in the form of innovation lunches or workshops. Their success shows how greatly they are appreciated by teaching staff. This is a major evolution as teacher training (still largely based on voluntary work) was beforehand essentially focussed on technological aspects. At national level, teachers training Mooc are proposed. The added value of activities linked to digital technologies has been integrated by some establishments in the new activity referential (method of evaluating activities performed by a teacher) which, as stated in the 31 July 2009 decree <sup>35</sup>, is now both recognizing distance and face to face teaching or the creation of digital content. This is a significant change, as previously, obstacles, including legal ones, for the recognition of distance learning activities were present.

In the United Kingdom, establishments develop distance courses in collaboration with university multidisciplinary teams, specialists, learning technologies services<sup>36</sup> and the documentation department. Recently, priority was given to include the integration of the methodologies of learning models, in the process of course development. The university encourages and supports the development of learning activities and accompanies teachers for the creation of their on line projects.

In Italy, teachers training is organised in small groups and are linked with the dematerialisation of services as well as information on the use of the platform. Coaching in

---

<sup>35</sup> Activity frame

<http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000020974583&categorieLien=id>

<sup>36</sup> LTS the interface for technologies used for teaching





Mooc development initiatives is offered for the conception and production following a viability study and the advice of governance.

In Spain, coaching for teachers is proposed for the digital adaptation of courses through individual advice or group work sessions. Tutorials are produced to help teachers and conferences and seminars are organised on TICE feedback.

## 5 ACCESS TO KNOWLEDGE FOR ALL : MYTH OR REALITY ?

### 5.1 Free digital resources in expansion

In 2002, MIT was proposing 50 courses<sup>37</sup>, in September 2015, 2296<sup>38</sup>. Currently Coursera offers 1087 courses to over 17,7 million learners, including 138 world partners and American institutions (18 February 2016 data from their site). The chart below (France Strategy 2016) illustrates the increase in the amount of Mooc.

---

<sup>37</sup> <http://ocw.mit.edu/about/our-history/>

<sup>38</sup> [http://ocw.mit.edu/about/site-statistics/monthly-reports/MITOCW\\_DB\\_2015\\_09.pdf](http://ocw.mit.edu/about/site-statistics/monthly-reports/MITOCW_DB_2015_09.pdf)



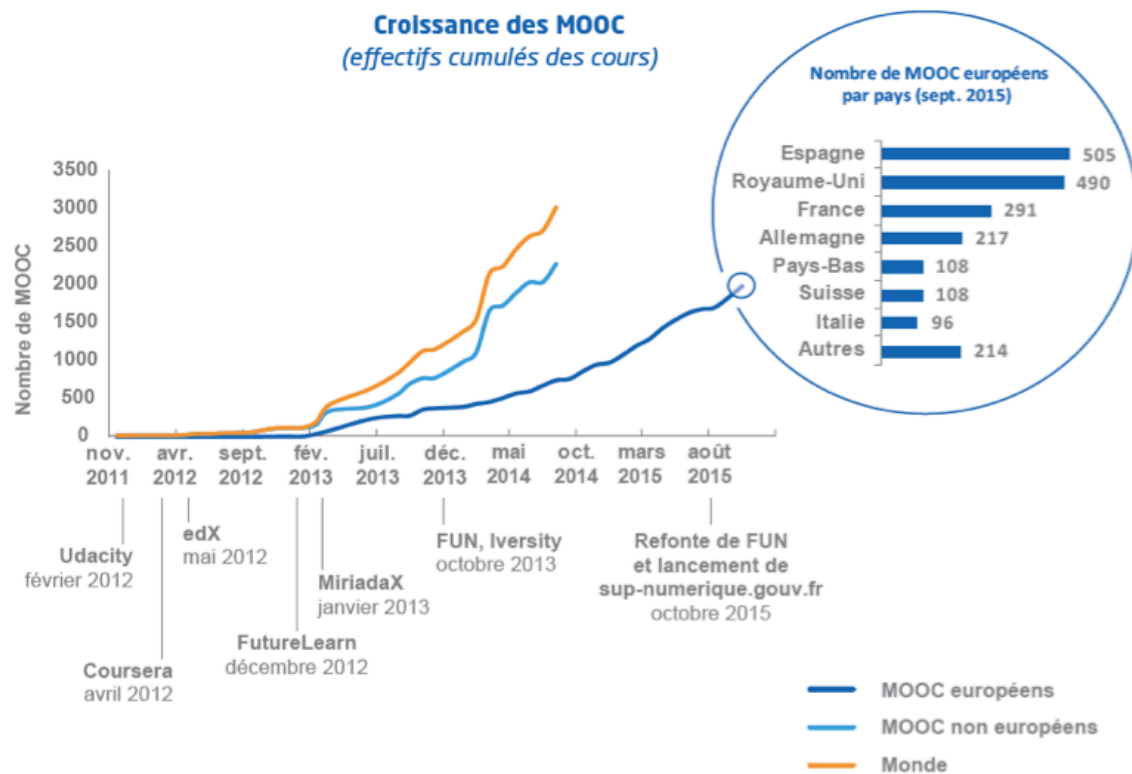


Figure 1 MOOC international Growth (total courses attendance)- France Stratégie (2016)

The 2013 European project report POERup<sup>39</sup> (Report on Comparative Analysis of Transversal OER initiatives ) analysed 120 OER initiatives around the world distributed in three main categories (cf figure 4) : open courses (MOOC or courses chosen on OpenCourseWare); manuals; other digital resources with various sizes and forms (video, audio, articles, games, course syllabi, MCQ etc. )

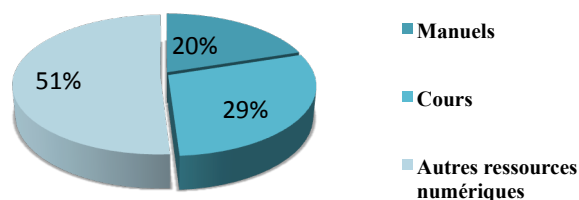


Figure 4 OER types break down in projects (Poerup, 2013)

<sup>39</sup> The main objective of the European Project POERUP is to develop policies aiming at promoting the adoption of OER especially in Europe in all education sectors.



The geographic localisation of these 120 initiatives shows a European prevalence with 38% of projects, followed by North America (Canada, United States) with 30 %, 13% for the Asian Australia zone, 7% for Latin America and 4% for Africa. Lastly, 8% are in the scope of international projects mostly being initiatives including the United States, the United Kingdom and African countries. In a OER projects classification by country, United States comes first with 34 initiatives, followed by the United Kingdom (10), India (6), Spain (5), and South Africa with 4 projects. 48% of OER are in English, 28% are multilingual and 24% in another language.

In the survey (IPTS, 2016) carried out in five European countries among which France, Spain and the United Kingdom, about 40% of surveyed establishments declare they feel concerned by open education (with a peak above 60% in the United Kingdom) even if for one third of them, this only relates to a few universities. 20% of establishments already propose Mooc and for 20% it is noted in their projects (this figure is 72% in the European project report (Home, 2015) probably because of the types of survey audience linked to EADTU). This confirms the high development potential of Mooc in Europe, in comparison to what has come out of the American surveys, reporting a trend for disinvestment probably for economic reasons, in spite of the significant figures in the creation of Mooc.

## 5.2 For an easier creation and use

In ten years several issues have been impacting the OER sector, tackled by many national and international projects: production, modification and re use; dissemination, indexation and tracking; quality and innovation; inclusion in teachers and students trainings, certification and graduation, sustainable economic models.

### 5.2.1 From creation to modification of free educational resources

Wiley (2010) clarified under the 4R “*Reuse, redistribute, revise, remix*” the possibilities offered by open license OER. The “reuse” is the most basic form of being open, individuals are allowed access to all or part of the resources for their own use. “Redistribution” allows to





share the work with others. “Revision” allows to adapt, change, translate or alter the shape of the work. And “Remix” allows to take several existing resources and combine them to create a new one. The whole process needs the development on standardization, quality and research.

The OECD (2007), in a report on Open Content Licensing (OCL) for Open Educational Resources<sup>40</sup> presents free licenses as a necessary adaptation of the copyright laws in the face of new uses induced by new technologies allowing for the formation of a virtuous circle: the more reusable the resources, the easier the creation of new ones. More recently the Creative Commons insist on the fact that open content license allows for the reuse and combination of resources: “users can combine and mix works coming from various sources” (States of Commons, 2014)<sup>41</sup>. In its 2014 report, the Creative Commons highlights a significant increase in the use of open content licenses. In 2006, there were 50 million elements with a *Creative Commons* license, there were 882 million in 2014 and nearly one billion licenses were numbered for 2015. The use of Creative Commons licenses for the production of resources in European Universities however remains relatively limited. The attribution license allowing to duplicate, adapt and disseminate a work with the condition of mentioning the author is the most frequently used. It is followed by the attribution and sharing under the same conditions (CC SA). Finally 76% of authors authorize adaptation of their contents.

### 5.2.2 From indexation to management and dissemination tools

Since 2002, many projects have been implemented in the view to facilitate OER searching, sharing, re use and collaborative practices.

OER users are teachers, students, coaches and the general public. Finding on line resources can end up a complex task in terms of time, quality and efficiency. The question of resource indexation is therefore crucial. Banks, repertory, and resource portals will allow to locate, aggregate, organise and disseminate the digital patrimony of educational institutions.

---

<sup>40</sup> Open Content licensing (OCL) for Open Educational Resources by Professor Brian Fitzgerald QUT, Australia (OECD, 2007). <http://www.oecd.org/edu/ceri/38645489.pdf>

<sup>41</sup> <https://stateof.creativecommons.org/report/>







Thus JORUM<sup>42</sup> is an OER repertory in the United Kingdom created in 2002; funded by the JISC (Joint Information Systems Committee)<sup>43</sup> it works for the promotion of re using resources. Although the service is due to close in September 2016, all resources will be available again on an app JISC, still with free access and on a platform where users can share and discuss (blog)<sup>44</sup>. At a time for nomadism and networking, the objective is to promote resources on mobile applications together with idea sharing allowing for the crowdsourcing between education and research.

Numerous OER repertory have been developed in Europe or throughout the world, for instance the REFRER (French network of reusable education resources), Escuelapedia (Spain), Leeds Metropolitan University, OTTER – Open Transferable and Technology-enabled Educational Resources, Xpert (UK) OER Commons or The Learning Resource Exchange (Paneuropean), Procomun or RODA (Spain). To harvest the resources on various sites and portals, their *interoperability* is crucial. The principle of free access educational resources is that it can be reused and adapted to various uses, thus education resources must be available on all supports, downloadable and adaptable to all platforms (OECD, 2007).

An essential issue concerns the indexation of education resources to facilitate their location and dissemination. The description of resources via metadata (author, subject, educational approach, technical characteristics, rights) improve regularly in conjunction with European and international standardization norms. This aims at easing Internet research, resource management and archiving, managing and protecting intellectual ownership rights, reducing efforts and costs through the use of resources in various contexts. These include the IEEE LOM<sup>45</sup> standard or the ISO MLR norm<sup>46</sup>.

---

<sup>42</sup> <http://www.jorum.ac.uk/>

<sup>43</sup> Non ministerial public body whose role is to sustain higher education and research providing advice digital resources and network and technology services whilst searching and developing new technologies and work methods.

<sup>44</sup> <http://jorum.ac.uk/retirement/>

<sup>45</sup> <https://www.imsglobal.org/metadata/>

<sup>46</sup> [www.iso.org/iso/fr/catalogue\\_detail.htm?csnumber=62845](http://www.iso.org/iso/fr/catalogue_detail.htm?csnumber=62845)





### 5.2.3 An assurance of quality, a tool for users' appropriation

As the ENQA reminds us (The European Association for Quality Assurance in Higher Education) “quality fundamental responsibility remains in the hands of the university world. Quality internal assurance is a duty for higher education establishments and is the obvious link between the development of an effective quality culture within higher education establishments and the operational autonomy degree they enjoy.”

On line access has led to the renewal of these questions on quality. There is a great variety of approaches, tools and quality procedures that can be applied to OER (Camilleri, 2014). An example for this is the PERICLES French project<sup>47</sup> financed as part of the Plan “Investissements d’Avenir” (investments for the future) proposing an on line tool to evaluate the quality of training and resources and allowing for higher education institutions to implement an internal quality assurance approach based on self determined criteria. This tool is configurable, it can be integrated to normal environments, and allows comments from teacher, coach or the establishment’s point of view.

Whilst we can note a certain reduction in the creation and distribution of open contents due to quality concerns, this is a question of increasing confidence of learners and teachers (ICDE)<sup>48</sup>. For example OPAL<sup>49</sup>(Open Educational Quality Initiative, 2009-2011) born from a partnership between seven organizations among which ICDE<sup>50</sup>, UNESCO and the Open University in the United Kingdom, endeavours to create this confidence through the focus it places on “Open educational practices”. Its objective is to harmonise production modes of educational resources and to elaborate on the extent of how open educational practices can induce positive transformations in teaching and learning. Mutualisation may be considered a vector of quality.

---

<sup>47</sup> <http://v2.e-pericles.org/>

<sup>48</sup> <http://www.icde.org/ICDE+to+play+key+role+in+Open+Educational+Quality+Initiative.9UFRzW5W.ip>

<sup>49</sup> [open.ac.uk/iet/main/research-innovation/research-projects/open-educational-quality-initiative-opal](http://open.ac.uk/iet/main/research-innovation/research-projects/open-educational-quality-initiative-opal)

<sup>50</sup> International Council for open and distance education





#### 5.2.4 From productive teacher to unifying project

Collaborative Projects were born from an objective of improving and opening to meet with the needs of the final user, they include educational institutions for the creation and the dissemination of OER. These projects are, in their majority, supported by public authorities. Three reasons for this. First, OER projects can, through their synergy effect, ease access to higher education for specific students groups (for example disabled students). Secondly these projects can bring together non formal learning, informal and institutional, allow for flexibility in careers and encourage lifelong learning. Lastly, sharing and reusing resources can allow establishments to improve quality and reduce elaboration costs (OECD, 2007).

In France for instance, Canal U<sup>51</sup>, is a French university community project launched in 2000 and steered by the Ministry of Education, Higher Education and Research. With 15000 videos in free access and free of charge in 2015, Canal U is the digital video library for French Higher education and a reference site for higher education audio visual resources. Teachers, students, searchers and the large public can find educational resources validated by scientific advice from the eight thematic digital universities (UNT). These UNT were created between 2004 and 2007 by the French Ministry in charge of higher education to support mutualised content production and dissemination of digital educational contents in eight large disciplinary domains. A national site allows to research, amongst their 3400 digital multimedia and audio visual resources, in free access.

This production was financed partially by establishments, and at national level. IPTS (2016) notes that, whilst in general terms, national collaborations are more significant than transnational, this is particularly true in France, where the highest collaboration rate from the five studied countries is to be found. This is mainly due to the existence of Thematic Digital Universities and to a strong tradition of collaboration between establishments in many domains linked to digital technologies. The same observation can be made regarding *open education*, in a general manner 60% of French establishments declare having a supportive

---

<sup>51</sup> [www.canal-u.tv](http://www.canal-u.tv)





mission regarding open education, compared to about 25% in Spain and 19% in the United Kingdom.

Spanish universities producing MOOC, state that they largely use MiriadaX for their hosting. In second position comes the Coursera platform followed by Iversity. Certain institutions tend to create their own platform (on the Moodle type) to centralise their training offer in terms of MOOC. The report “MOOC in Spain” (2014) shows that public universities generate most MOOC with 40% universities against 27% of private education institutions. Paradoxically 36% of face to face universities developed Mooc against only 17% of distance universities for which MOOC are not seen as an opportunity of setting a new distance course method and are not part of an exclusive strategy for the establishments. Three large Spanish universities together produce half of the MOOC on the territory<sup>52</sup>.

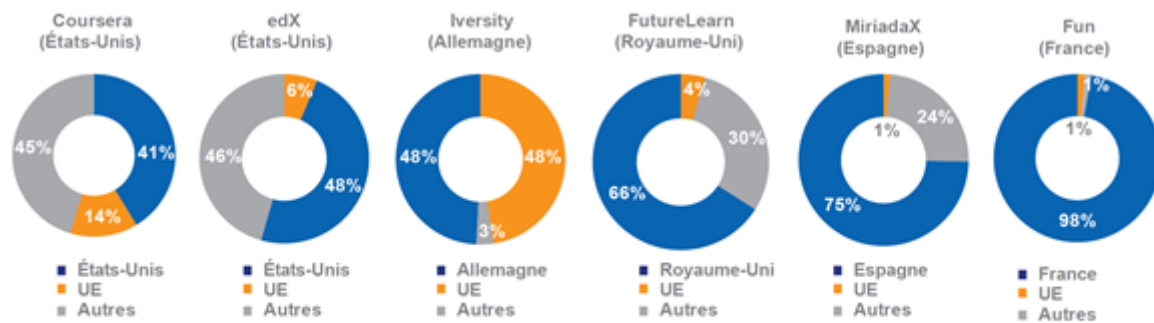
In Italy, contrary to other surveyed countries and where an overall policy on intellectual ownership is being defined within the establishments, there is no national platform. The Conference of Presidents of Italian Universities (CRUI - Conferenza dei Rettori delle Università Italiane) launched early 2016 the project « Moocs Italia » for the development of a common quality approach that will be the basis for the implementation of a national e-catalog of certified Mooc that can also match CFU (university credits). Moocs are hosted on different platforms such as Coursera, Iversity, OpenedX, Moodle. The choice of themes in these establishments and the MOOC hosting platform is made after agreement from institutional governance.

The geographic origin of MOOC on platforms reveals a strong attractivity of American platforms and a scattered European offer. In Europe, platforms mainly host on line courses produced by national establishments (see figure 5): the offer for FUN comes 98% from French establishments, 75% Spanish establishments go to MiriadaX and 66% of British establishments to Futurelearn.

---

<sup>52</sup> Source rapport « Mooc España » (2014) : l’Universidad Nacional de Educación a Distancia (UNED), l’Universidad de Cantabria (UC) et l’Universidad Politécnica de Valencia (UPV).





Source : Coursera, edX, Iversity, FUN, MiriadaX, FutureLearn (consultation octobre 2015). Calculs : France Stratégie

Figure 2 MOOC geographic origin on the main digital platforms in percentage (France Stratégie, février 2016)

### 5.3 Contrasted results

Did OER, as happened with MOOC, meet with sometimes “messianic” expectations in terms of broader access to knowledge?

#### 5.3.1 Broader and more diverse publics

We can establish that these tools have undoubtedly reached a new audience in comparison to more traditional higher education. Thus 1,5 million applications on the FUN-MOOC platform, 3 116 772 on Futurelearn, 1 987 347 on MiriadaX and 17 million on Coursera.

Whereas REL and MOOC reach teachers, students and the wide public, the most significant users seem not to come from the institution : only 9% teachers on OpenCourseWare, 10% students amongst the France Université Numérique users. 40% of Canal U audience is “main stream”.

It is seen to be a matter of lifelong education and the public authorities have been involved in that sense: as an example the first level paying service with OpenClassrooms is offered to all job seekers (cf.§3.4). Likewise Sebastian Thrun (Udacity) decided to give a “professional integration” orientation to their MOOC offer and funds application fees back to anyone who would not have found a job within six months after the training (Educpro, February 2016).





Part of the MOOC were associated with on line exchanges between users giving way to the making of communities who carried on exchanging once the Mooc finished on Facebook, LinkedIn, Google+ or else. These OER and Mooc have crossed paths with a public who was not necessarily the expected one. And hence we are back to the universities general role of disseminating knowledge and culture to the whole population (formalised for example by the notion of university “social responsibility” in the 2013 law on French higher education and research).

Furthermore these warehouses or platforms reach publics spread around the world. 20% of learners on FUN are outside of France and more specifically originate from French-speaking Africa, thus fulfilling the first wishes of bodies such as UNESCO.

#### 5.3.2 A largely graduate public

OER and more specifically MOOC are often pictured as a tool for democratising higher education. Current data on OER and MOOC however show that they do not benefit those with the most difficulties in accessing higher education. One can observe that most MOOC participants already have a higher education degree, - most of them with Masters - and live in developed countries. This public is therefore educated and with a relative autonomy in learning practices.

Paradoxically open access could turn out to be a potential factor of inequality, even the vector of a new educational divide due to the lack of didactics adapted to the variety of learners (Rohs & Ganz, 2015) outside of the western university system, and with the difficulty of creating coherent learning schemes in correlation with a training objective. (Brown et al., 2015).

#### 5.3.3 OER and MOOC support or obstacle to the supremacy of English

The hegemony of the English language is becoming a very concrete issue. The question is should OER be placed within a given cultural and linguistic learning context or should they be produced in English to reach as many users as possible. An increasing number of European universities propose OER in their own language (AdultTraining, 2015). European platforms,





especially Spanish and French, promote the diffusion in their national language even sometimes in multilingual courses. (EUA 2014). A certain amount of projects exist already in developing countries, aiming at using the open education resources based on their own language and culture (OECD, 2007). It cannot be denied that a prolific Mooc offer in English will encourage the use of this language, but it has been proved that one learns better in one's maternal tongue in terms of memorisation and optimisation of the cognitive process.

Often English is chosen as a learning language to meet with expectations of an international audience but we must bear in mind that there is a public for other languages throughout the world, namely French, Spanish and Portuguese. Yet in 2015, less than 15% of the Mooc European offer was in French, when there is a significant potential francophone market with 220 million people (half of whom live in Africa) throughout the world - this figure could reach 770 million by 2050. As a result of learners' cultural variety (according to data from end of 2014, 40% of students who applied on the platform came from Anglo-Saxon countries) and aware of the challenge of multilingual Mooc, Coursera launched at the end of April 2014, the Global Translator Community aiming to create subtitles in several languages with the help of the learner community.

#### 5.3.4 The autodidact myth

The focus on the last years on OER and more recently on MOOC finally puts into light the importance of accompaniment of learners as is reminded by Amadieu et Tricot (2014) "it is a myth of self education to believe that from the moment quality resources are available, all human beings should be autodidact" (...) "autodidacts are exceptions representing only 1% of the population, the remaining 99% need a guide to lead them towards knowledge." It must be noted that the Mooc drop out rate is high even if, for a good share of users, the objective is not to reach the end of the training. This puts forward the significance of the accompaniment and the search of new device such as Spoc. The policy of the last few years leads us to reconsider the role of the teacher and more generally the overall transformation of education. Digital education tools appear to be one of the steps of the establishments digital transition.





## 6 OER : A LEVER FOR TRANSFORMATION OF HIGHER EDUCATION ?

### 6.1 Learn with OER

In the evaluation results of the 2006 report of the platform, MIT indicated that teachers thought their teaching methods improved through free resources. For the OECD (2007) free sharing of resources will improve their quality, stimulate the creation of new educational resources, encourage re use and help higher education establishments to promote their use, internally and externally. Wider visibility would increase the quality of courses put on line, as would joint ventures.

However OCW platform statistics show in September 2015 a limited use from teachers with only 9% using OCW resources. Amongst these users 20% re use these OER in their course, 31% use them to improve their personal knowledge and 23% to learn new educational methods<sup>53</sup>.

More and more awareness, coaching and training are implemented in establishments or within single discipline communities. One observes however a constant gap between the use of OER and teachers collective practices. The main reason quoted for the weak commitment of teachers is the recognition of the changes that these new activities will bring (career evolution and investment time). Broadly speaking, there seems to be a lack of teachers' "pedagogical culture". Teachers are reluctant to use the courses of others (apart from certain formats such as exercises banks, microcapsule or simulation...), especially as these resources are not always easy to divide and reuse. They are also unwilling to make their course public or open, in spite of prestigious examples like MIT, because of complex copyright policies or the fear of too much exposure... But the spotlight on Mooc helps in their grasping digital techniques for education. As an example, the teachers who went for Mooc, no longer do their "traditional" course as before. Teachers produce and put on line more and more digital resources for their students. They often use them in a framework getting close to the "flipped

<sup>53</sup> MITOCW site statistics <http://ocw.mit.edu/about/site-statistics/>





classroom”. In the field of continuous education, training sessions both face to face and at distance are multiplying to avoid long absences from work and for a better appropriation of knowledge and competences.

According to EUA (2013), Home (2015) and IPTS (2016) Mooc development is a major trend in Europe for the coming years. Unlike the United States who consider it is yet too early to position on the Mooc contribution, most European institutions have a positive vision. Mooc develop in Europe because higher education institutions consider that they help to reach new learners, in particular in life long education (Home, 2015) and that they create new opportunities for a flexible learning process. They do not see Mooc as a selection tool for future students as is the case in the United States (Allen and Seaman, 2014). This major difference can be explained by the social dimension of European higher education, and through the existence of credits (ECTS) allowing for an institutional recognition between countries and establishments.

MOOC also put an emphasis on supporting the creation of forums, social networks and peer to peer relations, as well as sometimes on co-construction tools as illustrated by the evolution of social practices. The development of OER and MOOC can thus provide life long education inside or outside university with the perspective of flexibility and career personalisation.

In the United Kingdom, certain partner institutions of the OERu<sup>54</sup> use Mooc as a way to encourage their staff to commit to on line teaching methods for future more “profitable” developments.

To many, Mooc foster the hope to contribute to the improvement quality, develop current learning and educational practices thus allowing for the change that the Bologna Process and national policies did not allow (EUA, 2014). Common aims for all institutions are international visibility, the recruitment of new students and the development of new teaching methods. Costs cuts and profits are never mentioned regarding MOOC, which is understandable in the absence of a stabilised economic model.

---

<sup>54</sup> Open Education Resources university





## 6.2 MOOC a vector for pedagogic innovation?

The development of the first MOOC could have given rise to fears regarding the come back of the lecture theatre, whereas actually many innovations are taking shape in terms of learning on line. Futurelearn develop a “social learning” model with an interface which, as social networks, allows for a real-time communication, knowledge sharing and co-creation. American platforms seem to prioritize an individualised model according to the “adaptative learning” method (automatic adaptation of the learning processes to each user). Mixed training forms also appear: in the concept of the inverted class room, the course content is studied beforehand thanks to on line contents, or more recently Mooc, face to face time is set aside for exercises, projects and sharing.

Certain establishments develop, in the frame of traditional curriculums mixed learning methods with both on line and face to face sessions. Iversity’s partner universities can thus for certain courses deliver credits (ECTS). To get the certificate, the student takes a face to face exam at an Iversity center in Germany. Other initiatives go further in the recognition of degrees based entirely on online education: in September 2016, edX must launch a cursus with the Arizona State University, allowing students to validate a Bachelor year following 8 Mooc. Coursera will inaugurate their first qualifying MBA based on Mooc in partnership with the University of Illinois: students will be able to graduate and have access to services (interaction with teachers, complementary courses, corrections, etc.).

To improve on low completion rates, Mooc would gain in being more flexible, especially being more available on demand and not reliant on a session based format. In this logic, MIT promotes the method of inverted admission allowing the learners to follow courses at the institute before applying “try before you buy”. In the interest of personalising devices, Harvard has created the Harvard Extension School, proposing 700 courses that can be followed at night on the campus or only on line via videoconference or on line but with intensive face to face courses on the campus on week ends.







Lastly, the development of learning analytics collected in establishments or on online platforms, with guaranteed anonymity and personal data protection, leads to a better student

### 6.3 Opening up to the world through OER

European countries have decisively committed to the production of Mooc. These are increasing, in turn renewing old issues of problems distant education. Mooc are perceived as a sustainable means to propose open on line courses, to ease an efficient production of resources, to distribute knowledge and to use for training even if this is not yet part of the formal offer of European University education (EUA, 2014). As seen above, platforms have become a key aspect of dissemination and spreading of OER. They are often branded and sometimes have a function of support and animation in terms of tools and engineering.

Large platforms like FutureLearn in England, France Université Numérique or MiriadaX in Spain explicitly aim at international visibility, attractiveness and competition to which one could add a concern for the linguistic promotion and the bringing together of concerned speakers around common interests. The question is clearly to determine whether Mooc must be diffused in English, for visibility and attractiveness or to limit Mooc to a national language to ease apprenticeship in one's maternal language and preserve linguistic spaces like the French or Spanish speaking zones.

Mooc clearly remain an institutional visibility tool (Jansen & Schuver, 2015) and are part of a corporate strategy (for 60% of studied establishments-IPTS, 2016), considered as communication tool at least as much as an educational object. There is a certain paradox between humanistic education for all values displayed by Mooc initiators and the marketing and promoting of establishments' visibility and attractiveness.

In certain countries, on line education has even become a privileged modality abroad: in the United Kingdom, 36% of students following a British education abroad were doing it on line,





this is 164 000 students<sup>55</sup>. Beyond that, users geographic repartition on Mooc platforms reveals that 70% applicants do not live in the platform's country of origin.

In France establishments interviewed for our survey seem implicated in the Mooc production even if this position more reflects the necessary presence linked to visibility than to a genuine strategy of internal training. Certain institutions partners of the OERu<sup>56</sup> do not envisage Mooc development programmes when others use the FutureLearn platform as a showcase for their courses (taught face to face and on line).

The results of the study (IPTS, 2015) carried out in five large European countries, show differences between countries on the production of Mooc. In September 2015, Spain is leading for the most activity generated around Mooc, with 493 listed and 47 to come (Spain was the first European country to propose Mooc in 2013), closely followed by England which soon will take the lead with 474 Mooc listed and 101 to come. France comes fourth after Germany with 275 Mooc and 45 to come. In sixth position Italy with 78 Mooc and 3 to come (Figure 6) . It is still to be confirmed that Mooc is not only a passing fad but the crystallization of a deeper innovation phenomenon. It is worth noting that according to our survey we see a progressive awareness of actors on the possibilities of on line training (although this is not new) in an age of mobility and lifelong education. Equally the possibilities concerning new face to face teaching and mixed tools with questions on the best “accompaniments” for learners.

---

<sup>55</sup> BIS (2013), International Education – Global Growth and Prosperity, Department for Business, Innovation and Skills. Les données excluent Oxford Brookes University.

<sup>56</sup> Open Education Resources university



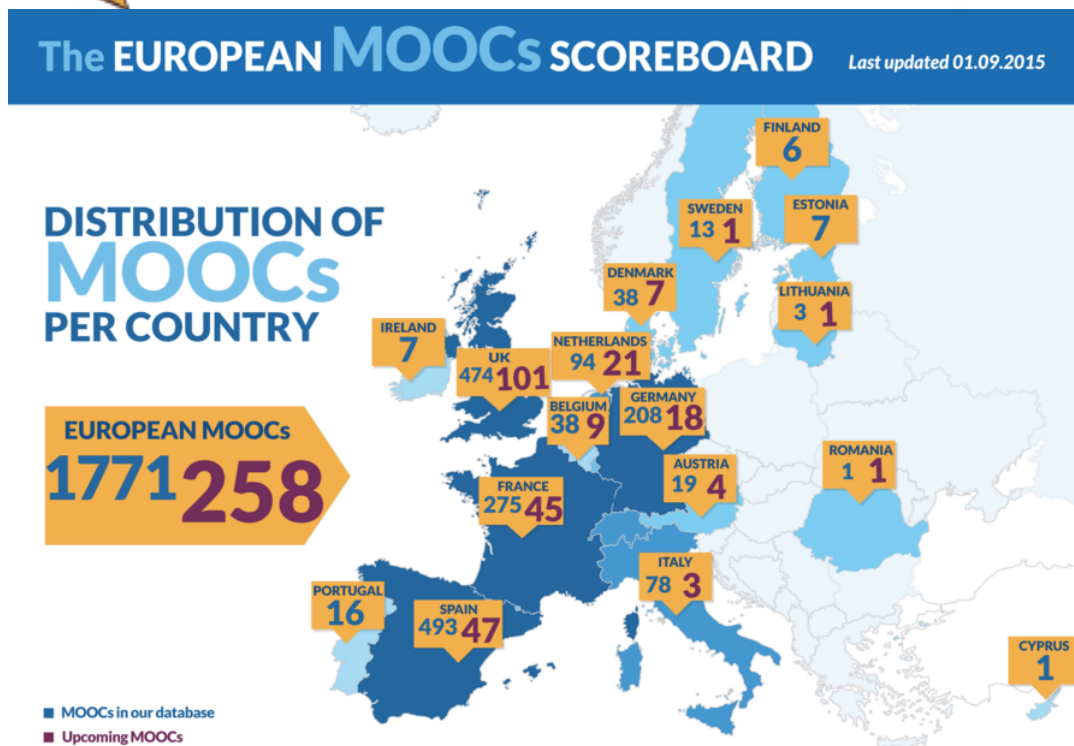


Figure 3 Universities with MOOC repartition in 2014

## 6.4 Rising economic models

Free OER and MOOC do not allow the production of added value from the content itself despite the fact that institutions need income to finance their production. REL like Mooc are searching viable economic models to guarantee their development or sustainability. Mooc providers are currently searching for viable economic models, the most popular these days is the freemium (a combination of free and chargeable services). The majority of platforms propose free access courses (free of charge) but with paying certification and other services. They set up other forms of monetization of Mooc so as to be self-sufficient or generate profit: paying coaching, corporate services, sponsorship etc.



The four main economic models (cf.01.A2) are (a) freemium, as proposed by OpenClassrooms or at least for the moment Coursera (b) loss leader where the institution recuperates their funds through other activities for which Mooc is used as a loss leader. An example of this is FutureLearn, where learners who have appreciated a Mooc should be motivated to apply for a masters at this same university, keeping in mind tuition fees are often high. (c) social where establishments consider as their mission to promote education for all. (d) patronage through the sponsorship from the economic world wishing to see certain competences needed for its own activity to develop.

There are also aggregators living from the sale of collected data but this model is not part of the European university world and can infringe the laws on personal data protection.

The following chart (FranceStratégie, February 2016)<sup>57</sup> summarizes the economic model of Mooc's main platforms amongst which FutureLearn and FUN.

|                         | Éléments quantitatifs |            |                                 | Modèle économique           |   |
|-------------------------|-----------------------|------------|---------------------------------|-----------------------------|---|
|                         | Nombre de MOOC        | % du total | Nombre d'inscrits (en milliers) | Type de plateforme          | Modalités de financement et de génération de revenus  |
| <b>Coursera (US)</b>    | 1 467                 | 38,6       | — <sup>(1)</sup>                | Privée à but lucratif       | <i>Financement</i> : levée de fonds. <i>Revenus</i> : programmes d'affiliation à Amazon ; services d'orientation professionnelle ; certification de cours ; surveillance des examens <sup>(2)</sup> |
| <b>edX (US)</b>         | 689                   | 18,1       | 5 000 <sup>(3)</sup>            | Privée à but non lucratif   | <i>Financement</i> : levée de fonds. <i>Revenus</i> : partenariats comme les fournisseurs de manuels ; Assistance dans la conception et hébergement de MOOC   |
| <b>FutureLearn (UK)</b> | 220                   | 5,8        | 2 450                           | Privée à but lucratif       | <i>Financement</i> : levée de fonds. <i>Revenus</i> : certification de cours ; surveillance des examens   |
| <b>FUN (FR)</b>         | 142                   | 3,7        | 570 <sup>(4)</sup>              | Publique à but non lucratif | <i>Financement</i> : dotations publiques et cotisation des institutions membres (trois paliers : 5 000 €, 20 000 € et 60 000 €)   |
| <b>Iversity (ALL)</b>   | 61                    | 1,6        | 600 <sup>(5)</sup>              | Privée à but non lucratif   | <i>Financement</i> : levée de fonds. <i>Revenus</i> : certification des cours   |

Source : <sup>(1)</sup> Coursera comptabilise 15 millions d'inscriptions mais le nombre d'apprenants n'est pas connu ; <sup>(2)</sup> EdTechReview (2015). Why are MOOCs different? Editorial Team ; <sup>(3)</sup> Site internet edX ; <sup>(4)</sup> Site internet de FUN ; <sup>(5)</sup> Site internet d'Iversity. Recensement effectué fin novembre 2015

Chart N°1 Comparison of the main digital platforms (Source France Stratégie, février 2016)

These models are combined with innovative initiatives. For example, to solve both the problem of the validation of university related Mooc and the search for economic models, MIT propose an “academic recognition of Mooc” through a first “MicroMaster” planned for

<sup>57</sup> [http://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/na40\\_Mooc\\_finale.pdf](http://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/na40_Mooc_finale.pdf)





beginning 2016. The student will follow the equivalent of the first semester free of charge with a Mooc and if he/she wishes will be able to validate his/her exams by paying with the possibility to finish the second semester of his/ her master face to face. He/she then will be awarded the same degree as the students on the campus for the whole length of their masters. The objective being to reduce tuition fees by half and with this new model attract international students. (Educpro, 2015)<sup>58</sup>.

Let us not forget the evolution of Coursera working towards a model to leave the choice when applying for either free access with content only or paying content with the corrections. Udacity proposes a money back guarantee, repaying the application fees if the learner has not found a job within six months.

### 6.5 To be or not to be open

Higher educational institutions are confronted with the issue of whether to publish their educational resources in open mode or not. There are different concepts referring to various realities: it is possible to share a resource (implying a free model) or exchange a resource (implying a community in which exchanges take place), or mutualise a resource (implying sharing but in a potentially closer circle), even to protect it (to avoid its reuse) or not to disseminate it (to guarantee exclusive use). These various options are far from being neutral and refer to different economic models. Certain establishments are tempted to not open their educational resources in the case where they are using them in paid training, because they refer a field of excellency, or simply so as not to expose resources which could be judged of lesser quality. It is up to the establishments to define their strategy in terms of the exposure of their resources. Therefore it can be interesting to place a Mooc on Coursera to benefit from its notoriety, or on FUN-Mooc to guarantee its promotion in French speaking areas, etc.

---

<sup>58</sup> « MicroMasters » MIT new MOOC : innovation Made in USA Article educpro 19/10/2015.  
<http://www.letudiant.fr/educpros/actualite/micromasters-analyse-predictive-et-candidatures-multimedias-l-innovation-made-in-usa.html>







The advantages of pooling or sharing an educational resource are many and varied, including notably the increase the visibility and the attractiveness of the institution.

## 6.6 Teachers still not convinced

In spite of the awareness, coaching and training programmes put into place by the establishments, in spite of recommendations in national and international public policies (OECD, 2007), there is an generally observed trend showing a gap between the recommendations and the teachers collective practices. In spite of the promising potential of OER, the lack of use in higher education especially for teachers, must lead to questions on the origins of this disinterest:

- Is there a lack of information for teachers? Should portal map projects be carried out on OER such as the OER map financed by the Hewlett Foundation? Should one put success stories forward to illustrate their contribution? Even if welcome and training days are organised for teachers (cf.§4.2) they rarely ever discuss the issue of OER, their production or use.
- Are OER badly adapted to teachers needs? One can observe the success of certain formats such as exercise banks, small capsules on specific subjects, and difficult to reproduce simulations...Moreover technical and legal difficulties remain significant when there is a need to easily and quickly recombine resources to create or personalise a course.
- Are educational practices using OER absent or only slowly emerging? Many social brakes exist today specifically that teachers only rarely use the course work of another (Chartron (2004) and MIT (2015)). A wider use and sharing of these resources is observed in contexts with national programmes or strongly organised networks (school sector, IUT networks in France...)





Following the analysis of our survey's questionnaire, a certain number of observations can be identified concerning the brakes of European surveyed establishments to transformation by digital technology. These points refer to old issues:

- The main reason given for this lack of commitment from teachers is the recognition of these new activities (career evolution and investment time). This lack of recognition of the teachers commitment in activities linked to the production of digital resources seems to be the main brake. Indeed digital activities are not always valued in teachers references, at least not in a uniform way by all establishments nor in their career evolution.
- Another observed brake is the lack of teachers' mobilization for their own formation. At the same time, one observes a lack of formation in new educational and digital practices before taking up their duties, even if awareness campaigns are offered in certain countries like France to doctoral students. More generally there seems to be lack of "pedagogical culture" in teachers. In particular there are, nationally and sometimes locally pedagogics experts, their works seem not to be diffused and consequently little known by teachers to help improve their educational activities.
- The last point concerns the emergence of MOOC whose final logic, for certain people, will mean the extinction of teaching jobs as in the "Classroom With No Teacher" published in the New York Times in 2011<sup>59</sup>.

According to the report "Beyond OER" (2011), the weak use of OER by teachers essentially comes from the lack of support from institutions, lack of tools allowing for the sharing and the adaptation of resources, lack of users time and competence and the insufficient quality of resources. There is a wish to implement a quality process shared by all but little action has been observed so far.

One can observe that only one of the causes is technological none are related to availability or access of the resource. OER challenges are now linked either to teachers' lack of time or

---

<sup>59</sup> Answer given to the limits in workforce in Florida. These are digital training laboratories in collaboration with Florida virtual school.





training, to the absence of accompaniment policies in establishments, to the lack of quality or language issues or simply to inadequate OER in the frame of the envisaged educational scenario. As a reminder, the study (IPTS, 2016) states that more than half of surveyed establishments (with a 75% peak in France) state they promote the use of OER. There are initiatives to incite the re use of contents such as for instance in the United Kingdom. Scotland is therefore committed to the OEPS bill (free education practices) considered as a significant tool for the use of open resources and especially today via Mooc.

The survey IPTS (2016) confirms that the teachers formation in the use of open education is a major challenge for its development. This is particularly true for France in comparison to Spain or United Kingdom where teachers are only trained in the traditional educational approach, even if Mooc for digital use training were launched in 2015.

Another identified brake is the necessity of an agreement with the authorities to develop a OER and even more so a Mooc. It is obvious that this is a disengaging element for teachers, even more so when considering that career evaluation and promotions are essentially linked to research and that the conception of a OER or a Mooc is very time consuming.

In conclusion, the reluctance seen in teachers refers back to values, history, context and culture both common and differentiated. There is obviously no unique answer. Today the question is not only to add more digital in educational training but to lead, together with all the actors, the transition of the establishments in a digital world in total turmoil. This adaptation seems to be a question of survival for traditional establishments with the arrival of new actors (including very strong ones such as Google or Amazon).

## 7 CONCLUSION

The D-Transform project is meant as a support for the directors of European universities to help rethink their institutional transformation strategy with digital technologies. It was seen to be indispensable to raise the issue of OER and Mooc as tools of the digital transition in higher education and to examine the contextual situation in four European countries. This work





could not be achieved without significant data collection from the field's literature and with a survey carried out, in 14 establishments, to better grasp the institutional context and observe the ground level reality of this transformation.

The main outcomes from our survey are that:

- Despite many reminders from Unesco or OECD, the establishments did not massively opt for OER. OER production remains essentially linked to public funding, European or international projects. According to our survey, the improvement (in notoriety or cost rationalisation for instance) arising from OER production outside such projects does not seem to be fully perceived, as the opening of educational resources remains little rewarded within establishments. Moreover copyright policies are diverse and little known (apart from Creative Commons licenses) and end up in most cases with teachers keeping their ownership.
- Various elements, collected both theoretically and empirically, confirm that although OER have not yet succeeded in playing the role of a tool for digital transformation in higher educational establishments, they have helped to raise awareness of the potential benefits of distance education. For the moment these developments do not necessarily stem from the establishments' internal strategy but rather from a concern not to “miss out” on something.
- The nomination of vice-presidents or vice-rectors in charge of digital affairs is an essential element in the recognition of the importance of the digital field in the transformation of higher education. However the depth of future changes implies that the whole governance is aware of the actions needed and feels committed, each in their own field of competence.

The challenge of open on line resources for education is the overall increase of competences in society, a faster transfer of innovation and research, a strengthening of the equality of opportunities whatever the social or geographic background. More than a simple digital transformation in universities, this is a transition, because the university model must change from an “elitist” to an “education for all” system enabling a lifelong education of the widest





number of individuals. Digital technologies and openness are reshaping universities; the main issue is that we do not know how and at what speed. Without even realising it completely, universities are currently being surrounded, penetrated and reshaped by Mooc and more precisely by open as well as by the competition from other national and international universities. The universities adapt to this new situation without questioning the future, essentially because in a world with multiple uncertainties that is constantly redefining itself, it is difficult to make forecasts. Combining short term considerations (rapidly changing matters such as technology and the evolution of professional knowledge requirements for which universities must prepare...) and long term considerations (the time required to implement training, create buildings and achieve cultural appropriation by teachers...), to adapt to the emerging social practices and to the “*uberisation*” of our society makes an agile governance indispensable. In this ever changing environment, universities must both preserve their underlying essential values and remain up to date with an ever-evolving society. Therefore agile governance and to a certain extent *user centric design* are key factors of the digital transition.

For OER to really find their place, a stronger collaboration is necessary between users (establishments, staff, learners) and partners (economic and social ecosystem...). The time has come for better integration of training transformation and digital transition in the overall strategies of establishments. It is in this context that the commitment of establishments’ governance becomes crucial and especially the commitment of the rectors, directors and presidents of the institutions. OER and Mooc are steps in the digital transition process within our society and our establishments. The field is open, it is essential that digital transition takes place. The world of education is becoming competitive and it is not only a matter of attracting students but also keeping students who could be tempted to study elsewhere. Emerging countries are producing OER and on line training and are actors in this newly redesigned landscape in which our universities need to be both universal and specific.

Beyond the obvious contextual differences, it is important to combine our efforts at a European level to create value, reference and initiatives. Digital transition will undoubtedly be at the heart of the new Bologna process.







D-TRANSFORM must plan for a “leadership school” project adapted to realities observed in the various university environments. The presence of Open U in three out of four countries as well as the diversity of university models (public/private, free/ high tuition fees, Mooc national platform or not, etc.) gives a context to our relationship with digital education and with the open and cannot be ignored. However there are certain common factors such as the necessity for an agile governance and its undivided commitment to digital transition, in collaboration with the actors and the education ecosystem whilst keeping in mind the construction of the European space for education and research. These points can be first discussed and debated during a day-long meeting together. They should then be contextualized in “leadership schools” specifically organised in each country, without omitting the participation of Open U in countries where they exist, as well as of national OER and MOOC actors.

Both visionary and pragmatic, “leadership schools” will bring enlightened support to governance, able to anticipate whilst remaining anchored in reality, helping to shape tomorrow’s university without renouncing its fundamental values.





## 8 APPENDIX- QUESTIONNAIRE

- 1- What is the role of digital technology in your institution's development strategy during the 2000-2015 period, and more specifically over the last five years?
- 2- Could you highlight one project related to online education conducted by your institution during the last five years?
- 3- What actions have been decided on to support the digital strategy, in particular the last 5 years?
- 4- What support actions for digital technology and resources have you developed towards the teachers?
- 5- What support actions have you developed towards learners?
- 6- In what ways does your institution use digital educational resources?
- 7- Is your digital strategy supported by partnerships? If so, what kind of partnerships?
- 8- How do you fund your digital actions?
- 9- Have you implemented a quality process to cover your digitally based education programme? If so, how?
- 10- What barriers did you face in the development of digital education? And how have you tried to overcome them?
- 11- What is the role of digital technology in your institution's development strategy for the next three years?





## 9 BIBLIOGRAPHY

- Allen, I.E., & Seaman, J. (2014). Grade change: Tracking online education in the United States. Babson Survey Research Group Report. Retrieved <http://www.onlinelearningsurvey.com/reports/gradechange.pdf>
- Amadiou, F. et Tricot, A. (2014). Apprendre avec la numérique, mythes et réalités. Éditions Retz. Savoirs pratiques éducation, 112 p.
- Brouns, F., Mota, J., Morgado, L., Jansen, D., Fano, S., Silva, A., & Teixeira, A. (2014). A networked learning framework for effective MOOC design: The ECO project approach. In A. M. Teixeira & A. Szücs (Eds.), 8th EDEN Research Workshop. Challenges for Research into Open & Distance Learning: Doing Things Better: Doing Better Things. Oxford, United Kingdom Budapest, Hungary: EDEN (2014, 27-28 October).
- Brown, M. (2015, June 9th). Opportunities and threats of the MOOC movement for Higher Education: A European perspective. Presentation at How Europe Seizes the Opportunities Offered by MOOCs, HOME Pre-Conference Workshop, European Distance and e-Learning Network (EDEN).Conference, Barcelona.
- Butcher, N. (2010). Open Educational Resources and Higher Education. <http://oerworkshop.weebly.com/documents-and-papers.html>
- Camilleri, A-F (2014). State of the Art Review of Quality Issues related to Open Educational Resources (OER). <http://is.jrc.ec.europa.eu/pages/EAP/documents/201405JRC88304.pdf>
- Chartron, G. (2004). L'indexation des ressources pédagogiques numériques : questions transversales Ghislaine CHARTRON-INRP et URSIDOC/Enssib, Lyon (2014). <http://www.enssib.fr/bibliotheque-numerique/documents/1241-l-indexation-des-ressources-pedagogiques-numeriques-questions-transversales.pdf>
- Downes, S. (2011). « Connectivism and connective knowledge (billet de blog, 5 janvier 2011). [http://www.huffingtonpost.com/stephen-downes/connectivism-and-connecti\\_b\\_804653.html](http://www.huffingtonpost.com/stephen-downes/connectivism-and-connecti_b_804653.html)
- Flichy, P. (2001). *L'imaginaire d'Internet*, éditions La Découverte, Paris. 273 p.
- Illich, I. (1973). Une société sans école. Réédité en 2003 et 2015. Points Essais, numéro 117.
- Jansen, D., & Schuwer, R. (2015). Institutional MOOC strategies in Europe. Status report based on a mapping survey conducted in October - December 2014. EADTU. [http://www.eadtu.eu/documents/Publications/OEenM/Institutional\\_MOOC\\_strategies\\_in\\_Europe.pdf](http://www.eadtu.eu/documents/Publications/OEenM/Institutional_MOOC_strategies_in_Europe.pdf)





Karsenti, T. (2013). Mooc révolution ou simple effet de mode ? *Revue internationale des technologies en pédagogie universitaire*, vol. 10, n° 2, p. 6-22.

[http://www.ritpu.org/IMG/pdf/RITPU\\_v10\\_n02\\_06.pdf](http://www.ritpu.org/IMG/pdf/RITPU_v10_n02_06.pdf)

Oliver, M.; Hernández-Leo, D.; Daza, V.; Martín, C.; Albó, L. (2014): *Moocs en España. Panorama actual de los Cursos Masivos Abiertos en Línea en las universidades españolas*.

<http://www.catedratelefonica.upf.edu/wp-content/uploads/2014/02/Moocs-en-Espa%C3%B1a1.pdf>

Paquette, G. (2014). REL 2014 - Pour une éducation libre (Mooc).

[http://rel2014.Mooc.ca/presentation\\_GilbertPaquette.htm](http://rel2014.Mooc.ca/presentation_GilbertPaquette.htm)

Perriault, J. (1997). De nouvelles gares pour le savoir. Les cahiers de médiologie 1997/1 (N°3). Gallimard. Paris 292 pages.

Thibault, F. (2007). Divorcer du technicisme. *Une histoire de l'enseignement supérieur à distance en France*. Distances et savoirs. Volume 5 – n° 3/2007.

Thot cursus (2014). Moocs latinos : un marché de 600 millions de personnes (30 septembre 2014). [http://cursus.edu/dossiers-articles/articles/24250/Moocs-latinos-marche-600-millions-personnes/#.Vp\\_H6BjhCqQ](http://cursus.edu/dossiers-articles/articles/24250/Moocs-latinos-marche-600-millions-personnes/#.Vp_H6BjhCqQ)

Wiley (2010). Openness as Catalyst for an Educational Reformation. *EDUCAUSE Review*, vol. 45, no. 4

<http://er.educause.edu/articles/2010/8/openness-as-catalyst-for-an-educational-reformation>

Worton, M. (2012). L'enseignement supérieur britannique aujourd'hui et la place de l'internationalisation. Repères N°15-2012. Campus France.

## Reports

Adult education and open educational resources (2015). Research for cult committee

[http://www.europarl.europa.eu/RegData/etudes/STUD/2015/563397/IPOL\\_STU\(2015\)563397\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/563397/IPOL_STU(2015)563397_EN.pdf)

Declaration de Porto (2014). « *On European Mooc* ».

[http://www.eadtu.eu/images/News/Porto\\_Declaration\\_on\\_European\\_Moocs\\_Final.pdf](http://www.eadtu.eu/images/News/Porto_Declaration_on_European_Moocs_Final.pdf)

EADTU (2015). *Institutional Mooc strategies in Europe*.

[http://www.eadtu.eu/documents/Publications/OEenM/Institutional\\_Mooc\\_strategies\\_in\\_Europe.pdf](http://www.eadtu.eu/documents/Publications/OEenM/Institutional_Mooc_strategies_in_Europe.pdf)

ENQA. (2009). Standards and guidelines for quality assurance in the European Higher Education Area (3rd ed.). Helsinki, Finland: European Association for Quality Assurance in Higher Education. [http://www.enqa.eu/files/ESG\\_3edition%20\(2\).pdf](http://www.enqa.eu/files/ESG_3edition%20(2).pdf)





EU (2015). The changing pedagogical landscape. *New ways of teaching and learning and their implications for higher education policy*. Education and culture. Luxembourg.

EUA (2014). *Second Occasional Paper on the topic of Massive Open Online Courses (Moocs)*.

[http://www.eua.be/Libraries/Publication/Moocs\\_Update\\_January\\_2014.sflb.ashx](http://www.eua.be/Libraries/Publication/Moocs_Update_January_2014.sflb.ashx)

France Stratégie (2016). MOOC français : l'heure des choix. La note d'analyse. Février 2016, N°40.

Hewlett Foundation, W. &F. (2010). Education Program: Strategic Plan. Retrieved from: [www.hewlett.org/uploads/documents/Education\\_Strategic\\_Plan\\_2010.pdf](http://www.hewlett.org/uploads/documents/Education_Strategic_Plan_2010.pdf)

JRC-IPST (2016). *How are higher education institutions dealing with openness? A survey of practices, beliefs and strategies in five European countries*. JRC Science for Policy Report, European Commission, to be published (January 2016).

OCDE (2007). Giving knowledge for free: the emergence of open educational resources. Les ressources éducatives en libre accès: Pour diffuser gratuitement des connaissances (Traduction française). Paris, OCDE, 149 p.

Version anglaise <http://www.oecd.org/edu/cei/38654317.pdf>

OCDE (2005). Les ressources éducatives en accès libre. Schéma conceptuel.

<http://www.oecd.org/fr/sites/eduimhe/38947274.pdf>

OECD (2007). Open Content Licensing (OCL) for Open Educational Resources by Professor Brian Fitzgerald QUT, Australia

<http://www.oecd.org/edu/cei/38645489.pdf>

OPAL Report (2011). Beyond OER Shifting Focus to Open Educational Practices.

[http://duepublico.uni-duisburg-essen.de/servlets/DerivateServlet/Derivate-25907/OPALReport2011\\_Beyond\\_OER.pdf](http://duepublico.uni-duisburg-essen.de/servlets/DerivateServlet/Derivate-25907/OPALReport2011_Beyond_OER.pdf)

POERUP (2013). « *Report on Comparative Analysis of Transversal OER Initiatives* ».

UNESCO (2012). World Open Educational Resources (OER) Congress 2012 Paris OER Declaration.

[www.Unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/English\\_Paris\\_OER\\_Declaration.Pdf](http://www.Unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/English_Paris_OER_Declaration.Pdf)

UNESCO (2010). Amener les ressources éducatives libres (REL) au-delà de la communauté des REL : développement des politiques et renforcement des capacités- Document préparatoire au Forum de l'UNESCO 1<sup>er</sup> décembre 2010.







UNESCO (2002). Forum on the Impact of Open Courseware for Higher Education in Developing Countries. Final report.  
<http://unesdoc.Unesco.org/images/0012/001285/128515e.pdf>

UNESCO (1946). Préambule de l'acte constitutif  
[http://portal.Unesco.org/fr/ev.phpURL\\_ID=15244&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.Unesco.org/fr/ev.phpURL_ID=15244&URL_DO=DO_TOPIC&URL_SECTION=201.html)

## Webographie

Canal U : <http://www.canal-u.tv/>  
[http://www.canal-u.tv/producteurs/universite\\_de\\_tous\\_les\\_savoirs#element\\_](http://www.canal-u.tv/producteurs/universite_de_tous_les_savoirs#element_)

Conseil constitutionnel français. Préambule de la Constitution du 27 octobre 1946  
<http://www.conseil-constitutionnel.fr/conseil-constitutionnel/francais/la-constitution/la-constitution-du-4-octobre-1958/preambule-de-la-constitution-du-27-octobre-1946.5077.html>

FUN (2014). *Qu'est-ce que FUN?*  
<https://www.france-universite-numerique-Mooc.fr/about>.

FutureLearn. [www.futurelearn.com](http://www.futurelearn.com)

Iiversity. <https://iversity.org>

JORUM. <http://www.jorum.ac.uk>

Miriada X. <http://miriadax.net>

OpenCourseWare, (2015). *About OCW*, Massachusetts Institute of Technology.  
Consulté le du 8 mai 2015, <http://ocw.mit.edu/about/>.

REFRER. <http://www.refrer.lice.fr/>

Universités numériques thématiques : <http://www.univ-numerique.fr>

