



UNESCO Institute
for Information Technologies
in Education

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Open Educational Resources in France: Overview, Perspectives and Recommendations

Moscow 2014

UNESCO Institute for Information Technologies in Education

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Published by the UNESCO Institute for Information Technologies in Education

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ISBN 978-5-905385-15-5

Printed in the Russian Federation

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Introduction

Open Educational Resources are a part of the movement towards opening up access to knowledge. The “Open Education” trend changes completely the global education landscape and throws education actors into the centre of a revolution that is comparable to that induced by the invention of the printing press (UNESCO, 2012).

Cultural revolution is a follow-up of the technical revolution. The Internet and all-digital era bring about a fundamental change in education. Teaching is irresistibly developing in a new relationship with time, space and action, the “three unities” changing and drawing up today’s “planetary classroom” (Vasseur, 2012).

In France, the teaching universe is in turmoil. The educational community feels as if it was compelled to action in a situation, where the stakes and the forms of engagement remain uncertain and permanently evolving. The universe of Open Education, which is still the reserve of the initiate and the expert, needs to be opened up to everyone. Above all, the notion of Open Education needs to be clearly explained, with its multiple fields, and the stakes of this revolution need to be understood.

Open Education: defining the key elements

Open Education is a vehicle for the universal and philanthropic values regularly appealed by the United Nations. In 1946, the Constitution of UNESCO, in its preamble, stated, “the wide diffusion of culture, and the education of humanity for justice and liberty and peace are indispensable to the dignity of man and constitute a sacred duty which all nations must fulfil in a spirit of mutual assistance and concern”. Two years later, the Universal Declaration of Human Rights stated that “everyone has the right to education”. Recently, in 2003, the Declaration of Principles of the World Summit on the Information Society encouraged Governments to “build a people-centred, inclusive and development-oriented Information Society, where everyone can create, access, utilize and share information and knowledge.”

The access to knowledge for anybody everywhere can at last be envisaged, through the arrival of new digital technology and the Internet, thus making feasible the political objective of democratising teaching. At the end of the 1990’s, the pioneering initiative of David Wiley, Professor of Brigham Young University, led to the birth of Open Education. He applied the concepts of free software and Open Source to education.¹ He “opened” and published his pedagogical resources on the Internet using a

¹ “Open source software is software that can be freely used, changed, and shared by anyone” (Open Source Initiative).

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legal tool: the Open Licence.² Later, he declared: “for the first time in the history of humanity, we have the resources to allow everyone to accede to the education they desire. And the most astonishing thing is that this is possible for a marginal cost.”³

The idea of “opening” has spread since then and convinced a large number of actors in education, who have developed its potential and this led to the concept of Open Education. In 2001, the president of the Massachusetts Institute of Technology (MIT), Charles Vest, started a race towards educational innovation. He announced that “all the teaching contents and courses used by professors from MIT would be accessible on the Internet ‘free to everybody’ and ‘reusable’ by others.”⁴

The OpenCourseWare project was a huge success in the educational community. Several major universities took part in the project and set up the OpenCourseWare Consortium.⁵ In 2002, two major international institutions, UNESCO and the Commonwealth of Learning (COL) organized the World Forum on Open Education Resources (OER). Ten years later, in 2012, the Paris Declaration was approved by the World OER Congress.⁶ This major document urged governments to accord open licences to educational resources funded by the State.

The concept of Open Education refers to both a movement and a community of people and, more concretely, describes different types of educational content that matches the original definition of UNESCO:

“Open Educational Resources are teaching, learning or research materials that are in the public domain or released with an intellectual property license that allows free use, adaptation, and distribution.”⁷

Gradually, different levels of organization of OER appeared in Open Education:

- The term OER refers to the publication of granular teaching resources without accompaniment or organization, for example, schemas, definitions, questions, etc.
- Open Courseware (OCW) are OER that are selected and organized into course modules,
- Finally, Massive Open Online Courses (MOOCs) offer, in addition to OCW, support to students with interaction and sometimes with the possibility of certification.

² A licence is a legal document that specifies what can (cannot) be done with a material (most often digital): text, image or sound. An Open (or free) licence specifies that the material can be freely used, transformed and shared.

³ David Wiley, Cable Green, and Louis Soares (2012). Dramatically Bringing Down the Cost of Education with OER, AmericanProgress.org, February 7, 2012.

⁴ Front page of New York Times in 2001 “Auditing Classes at MIT, on the Web and Free”, NYTimes.com

⁵ Today nearly 300 universities spread over five continents have joined the movement. Note that the OpenCourseware Consortium has changed its name to Open Education Consortium in 2014, ocwconsortium.org

⁶ The complete text of the Paris Declaration of the 2012 World OER Congress can be found at UNESCO website.

⁷ UNESCO (CI). Open Educational Resources.

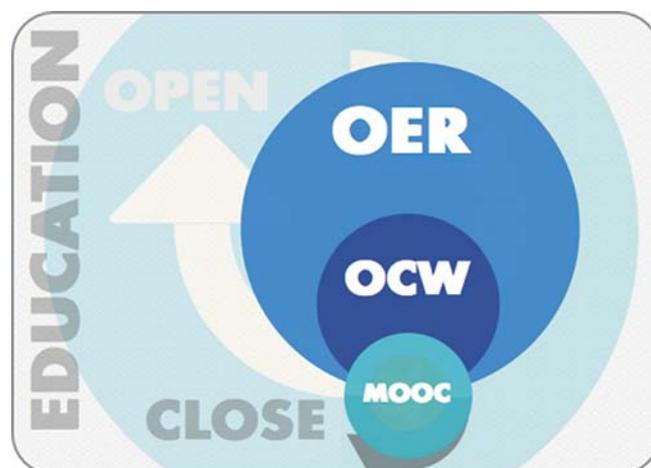


Figure 1: Hierarchy of OER, OCW and MOOC in open education. The diagram is inspired by the European Commission report “Opening up Education: Innovative Teaching and Learning for All through New Technologies and Open Educational Resources” (2013).

While MOOCs are now recognised as an innovative product of Open Education, their recognition as OER is the subject of debate.⁸ It is true that, according to the operators of MOOCs — SET, edX or FUN — not all MOOCs are ‘open’. In practice, it is up to the author to select a free licence, thereby confirming the Open Education approach. The best-known and most used licenses around the world are the Creative Commons licences that can be ported to the legislation of specific countries. In France, the Government has created a free license, the open licence.⁹



Figure 2: Open Licence by French government

What’s at stake in the “Open Education” revolution?

Open Education participates in the modernization of traditional models of education and renews the role of each model. Indeed, the introduction of OER has many advantages, which ensure new dynamism of the teaching process. For teachers, access to a wide variety of resources is a powerful means of inspiration for the design of courses. OER promote collaborative approaches and inter-university cooperation.¹⁰ Similarly, OER reduce time spent for the production of teaching materials and increase the availability of teachers for their students.¹¹ Moreover, the large audience potential of OER means producers of resources are likely

⁸ “If MOOCs aren’t based on OpenCourseware, they will become a ‘closed’ space and that will be a step backwards after the progress made in the last few years”. From an interview with Professor George Siemens, University of Athabasca, June 2013.

⁹ The description of the Open Licence of French government is available in Appendix 1.

¹⁰ Seth Gurell (2008).

¹¹ Stephen Downes speech to the Forum on the Economy of Knowledge, ‘Open Apprenticeship and Business’ Edmunston, 2012.

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to be even more attentive to the quality of the resources. The role of students is also changing. Formerly regarded as passive learning recipients, they are now “voluntary collaborators”.¹⁵ Ten years of experience have shown that the adoption of Open Education by universities increases the quality of education, the number of registered students and especially, the level attained by students.¹² Even more, it creates new methods of teaching that “... are not independent from each other, but are assembled in a form of disruptive education that transcends borders”.¹³ With more than 5 million learners within a single year, the extraordinary success of MOOCs has convinced most universities of their value and renewed student numbers, going beyond geographical, cultural and economic frontiers. At Harvard, MOOCs have attracted more students in one year than over the period since Harvard’s beginnings.¹⁴ Another pedagogical innovation is gradually taking effect: flipped education or “reverse education”.¹⁵ Popularized by the Khan Academy, this method of learning offers a reversal of the linear model of education by encouraging the student to watch videos about basic concepts before taking part in face-to-face courses.¹⁶

The Open Education has profoundly changed the relationship of the market to knowledge. Open Education revealed promptly new opportunities for development, associating the economy of teaching with a long-term business model. The president of MIT Charles Vest declared in 2001: “the Open Courseware project seems counter-intuitive in a world focused on the market. It goes against current material values, but it is really consistent with what I believe to be the best for MIT...It expresses our confidence in the way in which education can evolve positively, providing more access to information and inspiring others to participate”.¹⁷ While Open Education requires strong investment in the absence of business models, and a loss of earning for universities, it is certain that it also conveys an image of brand and represents an institutional showcase.¹⁸ In fact it is at once a guarantee of excellence for students, teachers and researchers, while attracting and recruiting the talents of tomorrow.

Finally, the context of fiscal restraint and the effort of rationalization of public action invite States and major international institutions to embrace Open Education. Indeed, it has proved to be a low-cost option to continue the democratization of education, the development of lifelong learning and the challenges of social inclusion. Furthermore, the opening and the reuse of public data in open formats, are participating in the emergence of a new sector of activities, the creation of jobs and innovative companies. This is a key element of the Paris OER Declaration, which encourages governments to implement a genuine digital policy for OERs and to expand the use of open licenses.

¹² European Commission (2013).

¹³ Open University report “Innovating Pedagogy 2012: Open University Innovation Report 1”.

¹⁴ BBC News, (2013), Harvard Plans to Boldly Go with ‘Spocs’, *bbc.co.uk*

¹⁵ One study completed by the Centre for Digital Education and Sonic Foundry, (2013) “The Up Side of Upside Down: Results From First National Survey on Faculty Perspectives on Flipped Classrooms” shows the development of this method in American faculties *sonicfoundry.com*

¹⁶ The Khan Academy is an open course platform using video clips. Created in 2006 by Salman Khan, it has had a phenomenal success with more than 6 million regular users. A French version has recently been launched by Bibliothèques sans frontières.

¹⁷ MIT Press Release 2001 “MIT to Make Nearly All Course Materials Available Free on the World Wide Web”, *web.mit.edu*

¹⁸ Progressively, several business models are emerging. The model Freemium (free+premium) offers a basic version free of charge and a paying version for extra services. Another possibility is to bill for certifications.

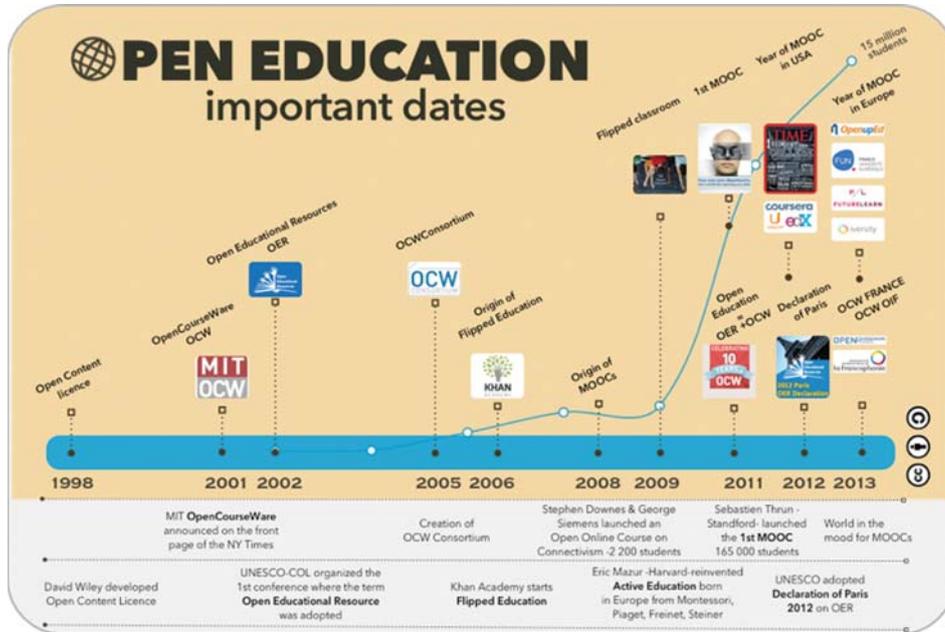


Figure 3: Important dates of Open Education

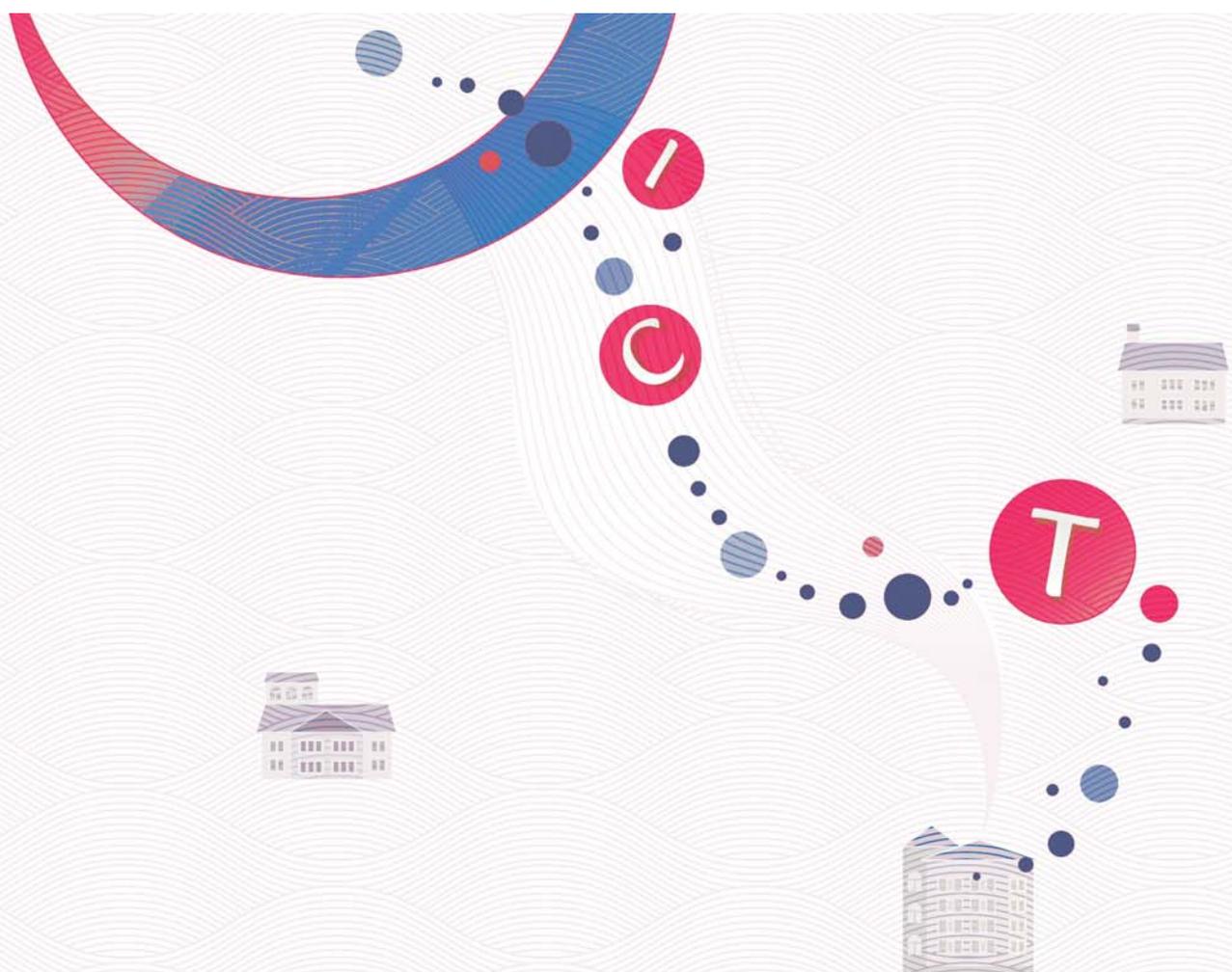
Open Education in France

France is recognised for its dedication to the democratic ideal and the defence of values that were at one time revolutionary, and which are now universal. Access to education and to knowledge for all is at the heart of the Republican model, and these ideals are the cornerstone of the French society.

In fact, the weight of this inheritance has nourished long-existing contradictions and encouraged divisions, which have been brought to light by the transition to the digital age. Whereas the French education system is struggling to reform, the rich harvest of Open Education in France in 2013 is encouraging. This is the result of the growing interest of a large number of actors and bears witness to the understanding of the importance of Open Education by policy-makers.

This report examines the development of Open Education in France and includes three main parts:

- Synthetic overview of the French educational model and description of the key elements and the actors involved in the vast debate on the integration of digital technology in education.
- Evaluation and critical analysis, description of several achievements and French strategies, identification of the prerequisite and challenges for free education in France.
- A series of recommendations and proposals for public decision-makers and professionals of this sector.



I. The French Educational System in the Digital Era



I.I. French Education: Mission, Actors and Functions

Education has been an eminently political question in France. Closely linked to national history and to the evolution of French society the “Republican model” is characterised by highly technical nature which has led to a complex and sophisticated system.

Education, the cornerstone of the French Republic

Let us cast a glance at the history taking into account the principles, which guide public actions related to education in France. In fact, teaching is thought of as one of the foundations of the Republic. Inheriting the principles of the Revolution of 1789 and the legislative work of the 19th century, French education is based upon five major principles:

1. Free (of charge) education: The principle of free public primary education, where no fees are paid by pupils for teaching, was established in 1881 before being extended to secondary teaching in 1933.
2. Mandatory public instruction: Since 1882, teaching has been compulsory. This requirement applies from the age of six until the age of 16 for all children of any nationality who reside in France.
3. Secularity: The principle of secularity (non-religious teaching) involves the respect of beliefs of the student and their parents as well as teaching.
4. Neutrality: Philosophical and political neutrality is indispensable for teachers and students.
5. Freedom of education: The freedom to organise and deliver teaching is an aspect of the freedom of expression. Thus, public education co-exists with private institutions under state control. Therefore, parents have the choice of either enrolling their children in a state school, a private school, or educating their children themselves under the pedagogic control of the state.

These five main principles make up the base of the public educational services, determine the organisation and operation of primary and secondary education, and to a great extent inspire higher education in its (public) university system.

Key statistics

According to the figures published in 2012, the French educational system in mainland France and in its overseas departments and territories incorporates 15.2 million pupils, students and apprentices enrolled at public and private institutions, which amount to 23% of the French population. It increased by 50,000 as compared to the previous year, essentially in higher education where the increase was by a factor of 1.5. Management is ensured by 1,057,000 people, of whom three-quarters are teaching staff, and one-quarter are other personnel, including administrative staff and senior management.

The budget allocated to education was estimated in 2011 as 137.4 billion Euros. This represents 6.9% of GNP as compared to 6.1% as an average for OECD countries. The average spending per pupil/student at all levels is 8250€, above the OECD average of 7840€.

The 2012 survey of the Programme for International Student Assessment (PISA) ranked France 25th out of 65.¹⁹

Organisation of the French education system

The French educational model is administered by the state, few functions are decentralised to the local level. It is placed principally under the responsibility of two ministries. The Ministry of National Education is in charge of primary and secondary education, whereas the Ministry of Higher Education and Research is in charge of post-secondary and higher education. The interdisciplinary role of the Ministry of Labour in professional training should also be mentioned.

The Ministry of National Education (Le Ministère de l'Éducation Nationale — MEN) is the state authority responsible for primary and secondary education.²⁰ Mandatory education from six to 16 years old is separated into three levels: primary school, secondary school, and high school. A feature of the French education system is to have also a pre-school level: nursery school. Being non-mandatory, it is attended by 97% of children between the age of 3 and 6. The classic pathway of a pupil is to enter nursery school at the age of three, primary school at the age of six, secondary school at 11, and high school at 15. At high school, pupil follows one of three paths: general, technological, or professional.

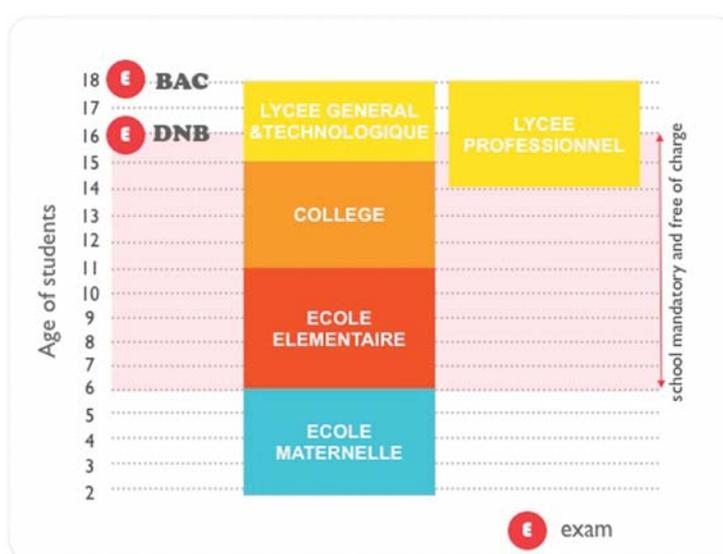


Figure 4: French educational system

¹⁹ OCDE, (2013), PISA ranking 2012, oecd.org

²⁰ Corresponding to levels 2, 3 and 4 of the UNESCO International Standard Classification of Education (ISCED-2011).

I. The French Educational System in the Digital Era

The mission of school is to allow pupils to acquire a common foundation of knowledge and competencies. The definition of that foundation is based on the recommendations of the European Parliament and the European Union Council regarding “key competences for lifelong education and learning”.

Two national examinations attest to competences acquired: the national school certificate (DNB) taken at the end of secondary school, and the *Baccalauréat* (BAC) taken at the end of high school. Obtaining a baccalauréat enables admission to the French higher education system.

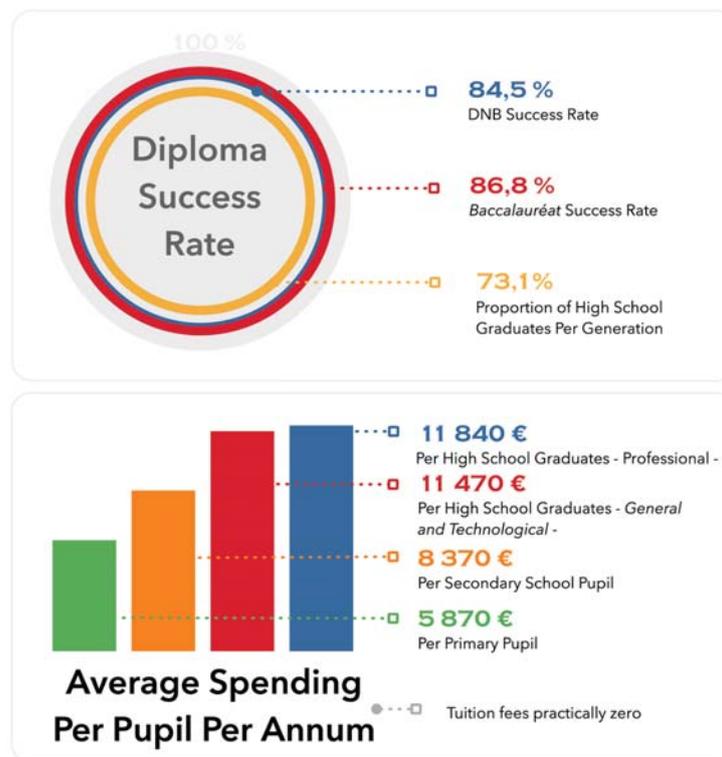


Figure 5: Key education statistics published by MEN (education.gouv.fr/cid195/les-chiffres-cles.html)

The Ministry of Higher Education and Research (Ministère de l’Enseignement Supérieur et de la Recherche — MESR) is the principal body supervising higher education.²¹ Its fundamental mission is to organise the education of post-secondary students and the recognition of grades and diplomas of private and public institutions. Beyond this separation between school and higher education, the French system is characterised by a substantive duality linked to the access of students to higher education institutions. In fact, it disassociates open access, multi-disciplinary universities from selective

²¹ Corresponding to level 5,6,7 and 8 of the international classification ISCED-2011 initiated by UNESCO

and specialised structures. This additional cultural exception is regularly pointed out by actors in the sector who decry the “complexity” and “incomprehensible nature” of available French education.²²

The “open access” part is comprised of 83 French universities, except for those providing training in health-related disciplines, such as medicine, pharmacology, dentistry and obstetrics. They are open to all persons holding a Baccalauréat or equivalent diploma and accept around 2/3 of all students (1.4 million). They are mostly funded by the State which sets teaching fees. The fees remain low in comparison with a large number of OECD countries.

The “selective” part is made up of three types of institution, admission is via examination and/or, by application. Firstly the “Grand Ecoles” select by examination after two years of preparatory classes. Next, the University Technical Institutes (IUT) admit school graduates by application. Finally, specialised schools use both of these methods. Teaching fees are much higher than at university and can vary widely according to the private or public status of the institution and its attachment to a university.

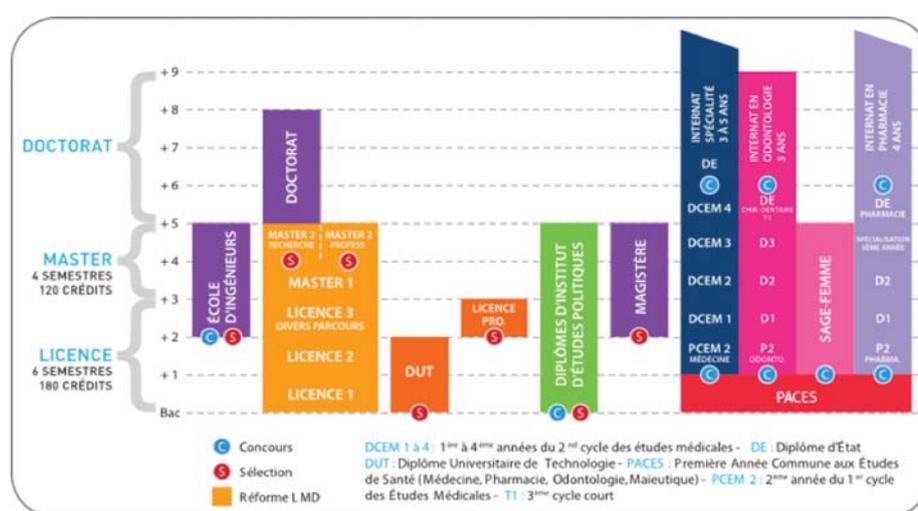


Figure 6: French Higher Education System (Source: Fédération des Associations Générales Etudiantes, licence CC BY NC ND, wikifage.org/index.php/Fichier:Schema_etudes.png)

Within the structure of the Sorbonne-Bologna process and the creation of the European Higher Education Area, France has made the architecture of its system of higher education and the pathways of student training more flexible. Put in place in 2004, the LMD reform reorganised university curricula around three diplomas, which use European credits: the Licence, or Bachelor’s Degree, Masters, and Doctorate. *Grandes Ecoles* and specialised schools have progressively aligned their training catalogues with this system.

²² Statements made by Geneviève Fioraso at the New Year Ceremony for actors of Higher Education and Research, 21 January 2013, Quai-Branly Museum

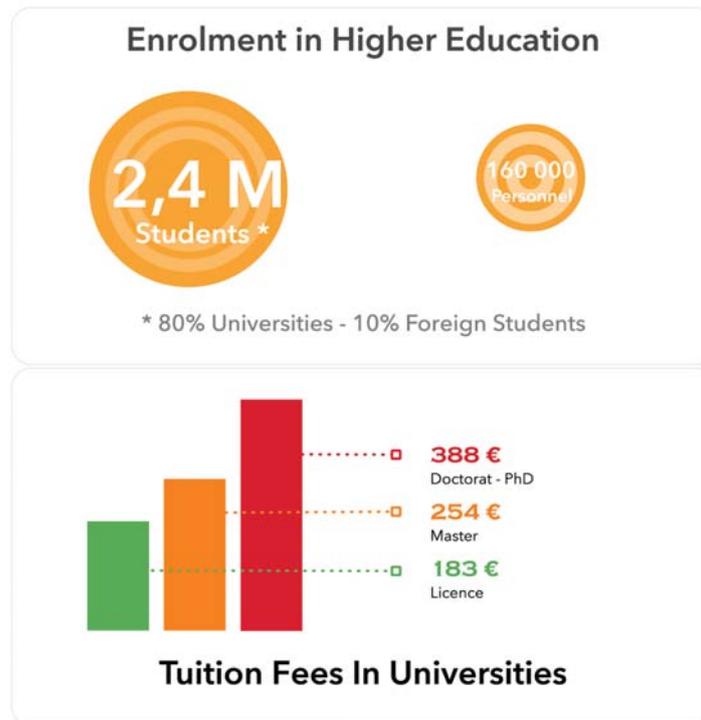


Figure 7: Higher education statistics published by Campus France in 2013 (campusfrance.org)

1.2. Digital Education Policies

Over the last ten years, French governments have made multiple initiatives to support digital integration in education. At first varied and separated, they have been grouped since around several ministerial strategies. However, central question, that of the rights of authors and legal structure, has been left aside.

From Internet training to the introduction of OER

The authorities have put in place certifications and qualitative training in computer and Internet skills for pupils, students and teaching personnel: *Brevet Informatique Internet* (B2i) and *Certificat Informatique Internet* (C2i). Inaugurated respectively in 2000 and 2002, these two competency passports attest to the mastery of multimedia tools and the Internet. They fall within the Information Society Policy of the European Commission and belong to the European Computer Driving Licence (ECDL).²³

²³ ECDL is a world standard with more than 12 million candidates. For more information, consult the Information Society gateway at: http://ec.europa.eu/information_society/index_fr.htm

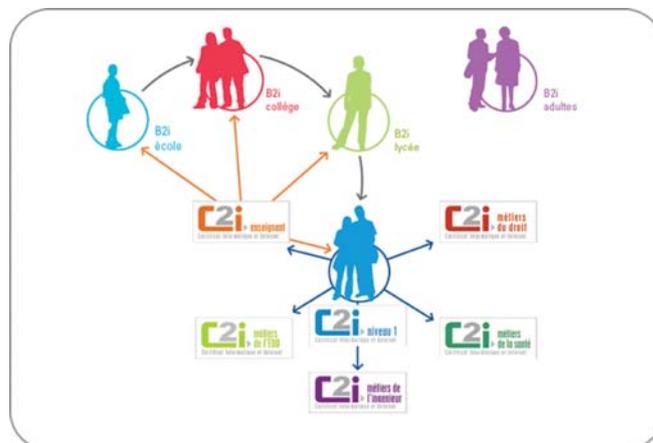


Figure 8: Digital competency passports B2i and C2i
(Source: Académie de Montpellier, sti.ac-montpellier.fr/spip.php?rubrique1068)

Furthermore, in 2004, the Ministry of Higher Education and Research (MESR) launched an innovative and pioneering initiative in digital teaching: the production of open educational resources (OER). The objective was threefold: to support student success, to promote the adoption of digital techniques by teachers, and to galvanize the international visibility of French Higher Education.

Seven virtual Open Universities — Digital Thematic Universities (UNT) — were established. 23,000 approved resources have been put online covering all academic disciplines:

- Engineering and Technological Sciences (UNIT UNT)
- Sciences (UNT UNISCIEL)
- Economics and Management (AUNEGE)
- Human and Social Sciences, Languages and Cultures (UNT UOH)
- Legal and Political Sciences (UNT UNJF)
- Environment and Sustainable Development (UNT UVED)
- Sport and Health Sciences (UNT UNF3S)

Moreover, the digital production offer was supplemented by the creation of a freely accessible virtual video library: the Canal U channel.²⁴ This WebTV records a large number of videos and conferences and references those made by universities.

All of these OER are available on the global OCWC gateway²⁵, and on the OCW France gateway²⁶ since the Ministry joined the OCW Consortium at the start of 2013.

²⁴ Available at: www.canal-u.tv/

²⁵ Available at: www.ocwconsortium.org/courses/

²⁶ Available at: <http://www.universites-numeriques.fr/ocw/>

Recent governmental digital strategies

Very recently, the government adopted an ambitious roadmap for digital technology in France.²⁷ It presents the challenge of integrating digital technology as a lever for “learning about, thinking of, creating and constructing tomorrow’s society”. This governmental document has since inspired two digital strategies for teaching from the two ministries: “Bringing school into the digital era” on one hand, and “France Digital University”, on the other.

“Bringing school into the digital age” (MEN)



Figure 9: Presentation of new digital packages offered by MEN
(Source: education.gouv.fr/panorama-services-numeriques/)

The Law No. 2013-595 of 8 July 2013 for the restructuring of France’s schools formalised the digital strategy of the Ministry of National Education. It set digital technology at the heart of primary and secondary education by inaugurating a “public service of digital education”. The mission is to offer “digital pedagogical services and content destined for the whole of the educational community”. With this aim, the Ministry announced the launch at the start of the 2013 school year, of a number of services designed to familiarise pupils, teachers and parents with e-education. These first initiatives also reveal the main lines of governmental action for the next few years:

Generalisation of the offer of OER: by generalising and diversifying the OER on offer by using existing resources. The Ministry has thus worked closely with public and private publishers to put several

²⁷ The government digital roadmap was presented on 28th February 2013 at the governmental digital seminar. It is available at: http://www.gouvernement.fr/sites/default/files/fichiers_joints/feuille_de_route_du_gouvernement_sur_le_numerique.pdf

free-of-charge platforms in place. For example, the *EduThèque* gateway gives free access to the resources for general public, cultural and scientific institutions for teaching personnel (only). In the same way, *Prép'Exam* proposes free-of-charge online access for candidates and their teachers to the scripts of Baccalauréat exams in the spirit of Open Data. Finally, teachers will shortly be able to benefit from the *Les Fondamentaux* platform, which will bring together reusable short videos or animated films about key points of the national curriculum (French language, Mathematics, or Sciences). These resources will be published in a free format.

Integrating e-education: The Ministry plans to develop e-education in the long-term by training teaching personnel. The *M@gistère* package offers online ongoing professional training for learning how to develop and create digital courses. Furthermore, the Higher Institutions of Teaching and Education (ESPE)²⁸ have since the start of the 2013 school year begun training future teachers and educational counsellors in the mastery and the use of digital tools for teaching purposes. Finally, the Ministry has selected 20 secondary institutions to pilot new scenarios of integration of digital technologies in schools — two or three hours a day of digital learning. These “connected secondary schools” benefit from important material investment thanks to the help of local authority partnerships.

Accompaniment and academic monitoring an innovation since it involves putting in place digital services to accompany the pupil and the monitoring of academic progress for parents. For example

FAIRE ENTRER L'ÉCOLE DANS L'ÈRE DU NUMÉRIQUE

ÉDUTHÈQUE
Un portail d'accès gratuit à des ressources pédagogiques des établissements publics, culturels et scientifiques à destination des enseignants

5

MODE D'EMPLOI

- Deux voies d'accès pour les enseignants :
 - un portail qui donne accès à toutes les ressources pédagogiques mises à disposition par chaque organisme partenaire
 - le site de l'établissement partenaire, via son espace réservé aux enseignants
- Une utilisation des ressources en téléchargement ou en ligne, directement en classe, en association avec des services multimédias pour plus d'interactivité (outils d'annotation en ligne ou de réalisation de diaporamas...)
- Mise à disposition en téléchargement de pistes pédagogiques d'accompagnement à l'utilisation des ressources en classe

L'ESSENTIEL

- ▶ Une offre pédagogique spécifique ciblée sur le premier et le second degré
- ▶ Des ressources facilement utilisables dans le cadre des cours, segmentées en niveaux et en domaines d'enseignement
- ▶ Des ressources gratuites riches et variées telles que des animations pédagogiques de Météo France, des vidéos d'histoire accompagnées d'un environnement pédagogique interactif de INA, etc.

#EcoleNumerique © ministère de l'éducation nationale - juin 2013

Figure 10: ÉDUTHÈQUE (Source: Ministry of National Education, education.gouv.fr/cid72353/edutheque-des-ressources-scientifiques-et-culturelles-publiques-pour-enseigner.html/)

²⁸ Accredited jointly by MEN and MESR. Pedagogical higher schools accept master's students willing to follow careers in teaching and education.

I. The French Educational System in the Digital Era

the service D'Col is offered to pupils. 30,000 entrance-level secondary pupils in educational priority areas are covered, after a proposal by the school and consent of parents. Two online career orientation services are also proposed: *Ma seconde chance* for young people and *Total Accès* for disabled pupils.

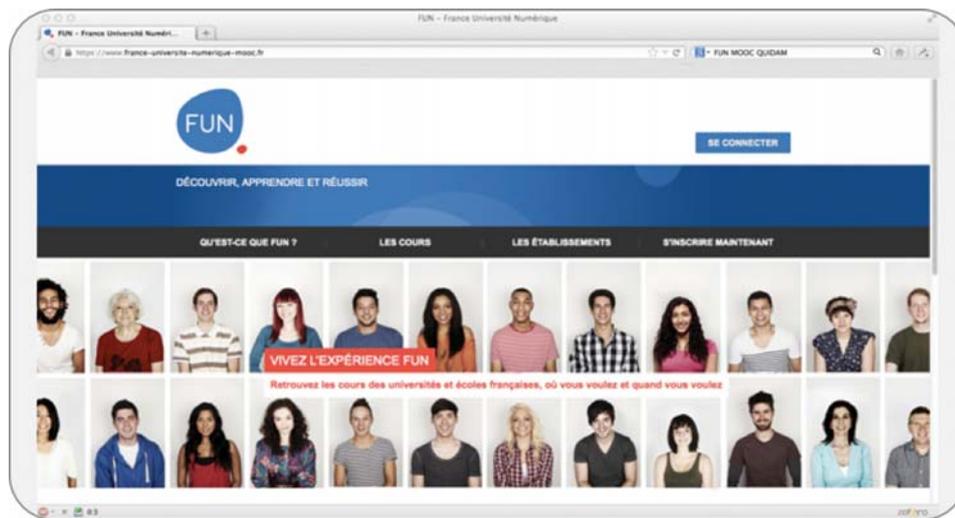


Figure 11: France Digital University (France Université Numérique (FUN) — <http://www.france-universite-numerique.fr/>)

The Law No. 2013-660 of 22 July 2013 regulates the reinforcement of integration of digital technologies in higher education and research, with the double objective of improving the level of training and the success of students. Three actions have recently been launched: the definition of a “digital agenda”, the creation of a co-ordinating foundation for training and opening of a national platform “France Digital University” (*France Université Numérique (FUN)*):

- Digital agenda defines the outlines of ministerial strategy by establishing digital missions. The four priorities, which emerge, lead towards the improvement of success and occupational integration, upgrading of pedagogical practices, integration of digital technology in university campuses, and centralisation of online training.

FUN supports institutions in the production and selection of high-level digital training. It also aims to reinforce co-operation between public institutions and private actors. The shared national FUN platform has a mission to house all French digital production and production of French MOOCs.²⁹ The technology to be used is edX.³⁰ It will be made progressively open to European and international higher education institutions. The central innovation of FUN is to offer a free-of-charge and free access to French university courses to all members of the educational community: students, professionals, job seekers or retired people.

²⁹ Twenty MOOCs were available at the beginning of November 2013.

³⁰ Official Press statement of 3 October 2013: “edX to work with French Ministry of Higher Education to create national online learning portal”.

MESR announced that during the next four years 500 positions will be open to assure competences in the digital training engineering of institutions and 12 million Euros will be mobilised to start the development of high-quality digital courses and programs.

Author's rights and open licences in the French digital landscape

Integration of digital technology in teaching raises a series of legal questions related to author's rights and intellectual property rights. In fact, without adjustment, the law seriously complicates the everyday pedagogical practice and exposes the student and teacher to legal action.

To promote the utilisation of multimedia documents, the French legal structure has integrated the principle of "pedagogical exception"³¹, and public authorities have signed agreements on the use of digital works with private businesses publishing and producing cultural work.³² The Law of August 1, 2006 regulates the opportunities for authorisation to use works in pedagogical context, and legalises reproduction and diffusion of extracts within precise and very restricted limits. This law was very technical and difficult to understand, thus a new law was passed July 8, 2013 with new agreements being signed for each sector³³ by MEN and MESP over the digital use of extracts of publications. These agreements cover all the institutions under the responsibility of these ministries. But it is still the case that the legislation is largely ignored and is poorly adapted to the all-digital age.

To facilitate reuse and protection of digital resources, a licence is needed, which would fix the rights, which are renounced by the author:

- right to copy the work — right of attribution: BY
- right to transform the work — the right to modify or derive: ND
- right to redistribute — the right to share: SA
- right to use a work for commercial purposes — right of commercial utilisation: NC

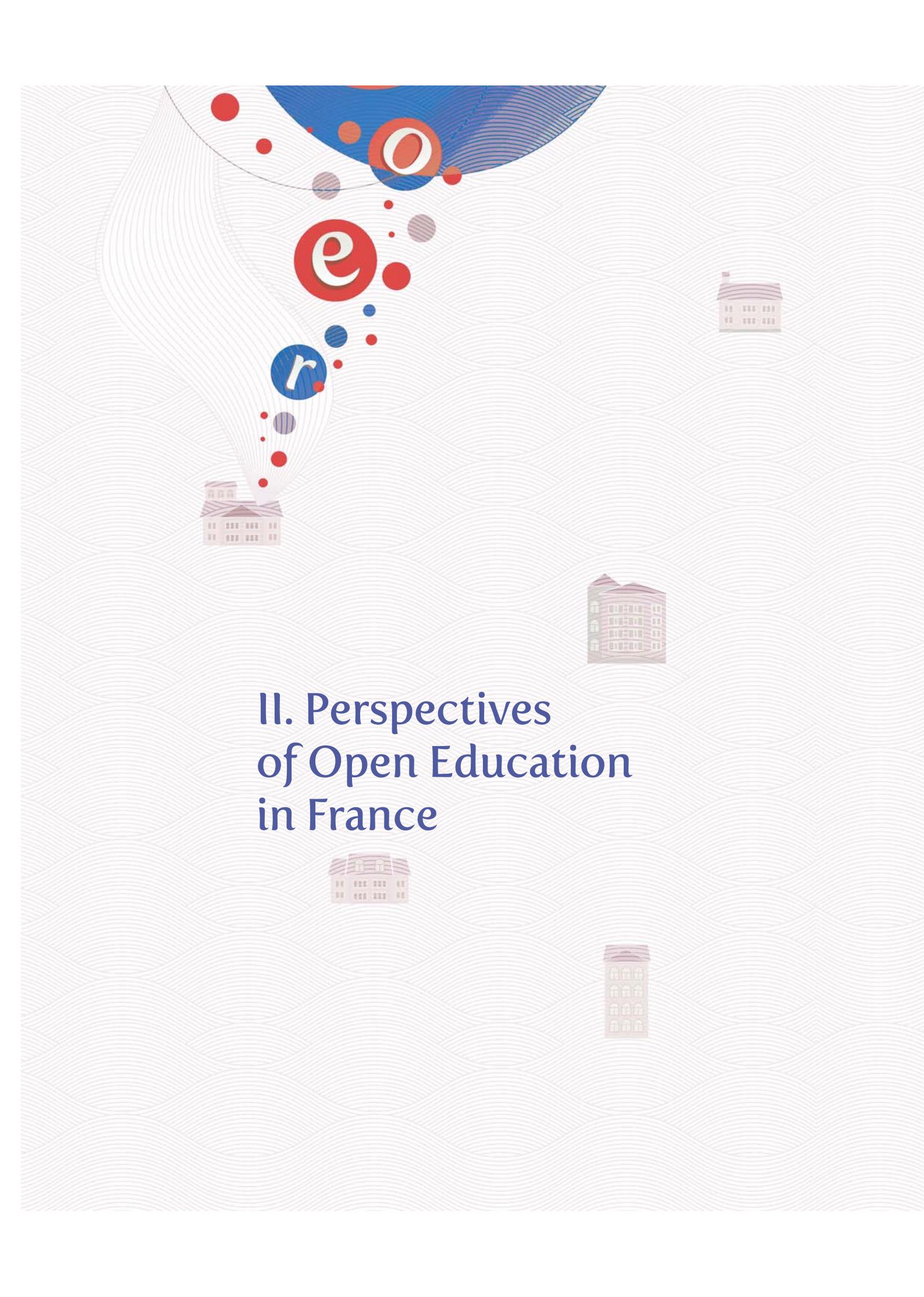
In return, the user must cite the author. Surrender of rights can be free of charge or be remunerated. There are six possible combinations, thus six licences, which set the degree of openness of a resource. The Creative Commons worked with the jurisdictions of 70 countries to harmonise these six licences.

The licences and notably the open licences CC BY, CC BY SA, simplify significantly the use of educational or cultural resources in teaching. When a teacher wishes to use a resource, which is under an open licence, they do not have to contact the author or organisation that holds the licence for authorisation to include it in their course. They just need to cite the author.

³¹ Explicitly "exception for teaching and research purposes" article 122-5 point e) of Law No. 2006-961 of August 1, 2006 on authors rights and related rights in Information Society.

³² These contracts are renewable and can be amended. Since 2006, six agreements have been concluded and the last ones were signed in 2012.

³³ For more details refer to <http://www.cfcopies.com/copie-pedagogique/etablissement-superieur/universite>



II. Perspectives of Open Education in France



II.I. Abundance of French Open Education

France has produced a considerable amount of quality resources. This high productivity results from the dynamics of a network of multiple actors, coming from the public and private sectors, as well as community organisations.

The diversity of media and content

The French OER offer is abundant. It covers a wide range of disciplines and has a distinctive strength in technological inventiveness. In fact, it is constantly adapting to reply to new needs of the educational community and to cultivate the desire to learn. For further clarity and greater understanding, the French achievements, which are described here in detail, have been organised according to the learning media used, and are preceded by a short description summarising their pedagogical value.³⁴

Repositories of teaching resources: They bring together “raw” OER, for example schematics, exercises, or mini-dictionaries — which have been conceived to help teachers in course preparation and personalization of learning for pupils. The French offer is particularly dense in this area and emanates principally from the organisations that belong to the SCEREN network.³⁵ Some examples are the gateways *Educasources* and *Académie en ligne* designed respectively for teachers and pupils, respectively. In higher education there are the seven Thematic Digital Universities — UNT.

Videos of conferences: These are now generalised in the university environment — mainly either as video or audio post-casts. They are aimed at a wide audience and their principal aim is to intensify the transmission of knowledge beyond the university. The video library *Canal-U* holds the majority of university products, more than 10,000 audiovisual resources, and attracts an ever-growing public audience of teachers and student.³⁶ Several institutions publish their recordings on iTunes U, for example, the prestigious *Collège de France*. Nine million course hours are downloaded on average each year.³⁷ The radio station “France Culture” has developed a similar large public offer, thanks to an extensive partnership with several *Grandes Ecoles* and universities, specialised press and public publishers: Web Campus. In the same register, some *Universités Populaires*, association for the education of adults, have similar productions; in Lyon, for example, videos of courses appear on the Unipop website.

³⁴ Details for each of the 44 initiatives can be found in the Appendixes. They are arranged according to the people or organisations that are responsible for the initiative — ministries, institutions, or private companies, etc.

³⁵ Services Culture Editions Ressources pour l'Éducation Nationale (SCEREN) is supervised by MEN. It consists of the Centre National de la Documentation Pédagogique and regional branches.

³⁶ The university channel recorded on average 153 000 monthly visits in 2011, more than 1.8 million total visits. The broadcasting hours are constantly growing: +34% in comparison with 2010.

³⁷ Some productions are translated into English. Classroom training sessions are also in free format, free of charge, and do not require previous enrolment.

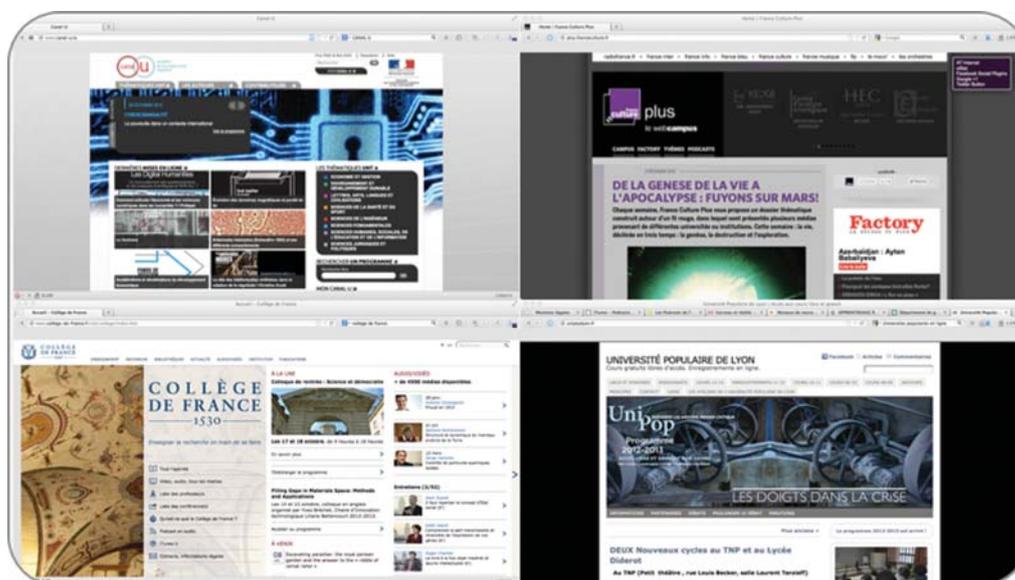


Figure 12: OER courses and conferences videos

Digital encyclopaedias and libraries: These initiatives made it possible to renew and diversify the offer by enriching classic learning media and adapting to the expectations of users, both junior and senior. The French National Library (Bibliothèque Nationale de France — BnF), has launched “the new and enriched reading desk”, or the book reinvented. This innovative service in partnership with Orange

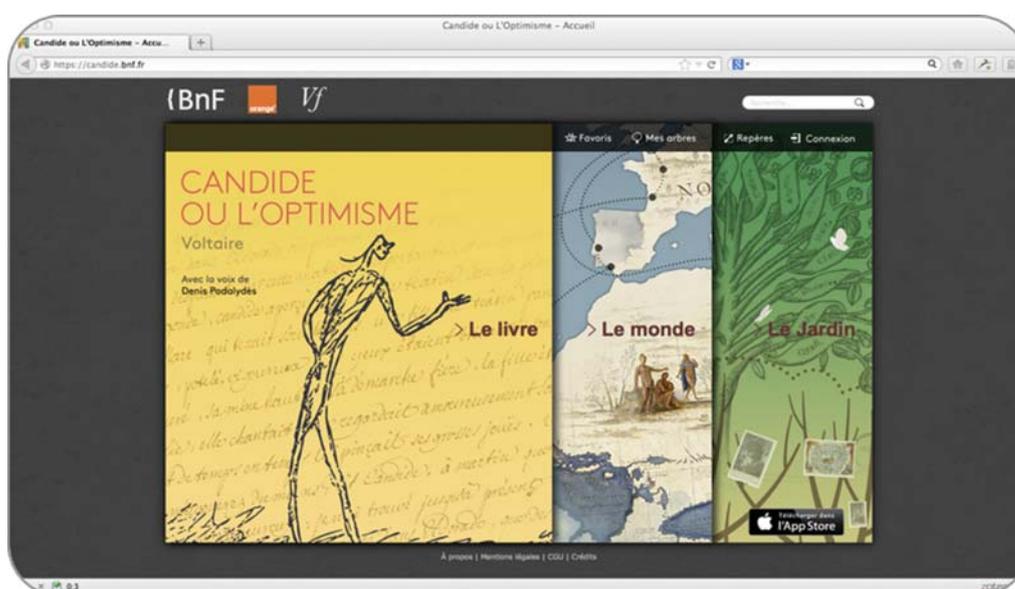


Figure 13: BnF/ Orange Foundation

II. Perspectives of Open Education in France

proposes the (re)discovery of great works of French literature such as *Candide* by Voltaire in an enriched version: animated pages, understandable commentaries, expert advice and a reading of the book by contemporary artists accompanies the reader.³⁸

It has also opened the gateway *Classes*, which offers an impressive diversity of educational resources: digitalised documents animations with comments, cards and teaching files, ebooks and games. In the same fashion, the National Audiovisual Institute (*Institut National de l'Audiovisuel* — INA) has developed the site *Jalons pour l'Histoire du Temps présent*, in partnership with the MEN. Presented as a gigantic multimedia fresco, more than 60 years of film and television press archives have been made available to teachers and students to revisit the history of the 20th century. *La Cité de la Musique* offers an equivalent information for music history. From the classics to contemporary music, more than 45,000 resources are available. Two Paris museums, *Cité de la science* and *Palais de la Découverte*, have developed a WebTV in the same spirit: *Universcience*. This brings together numerous popularised science resources in the form of timed television programmes.

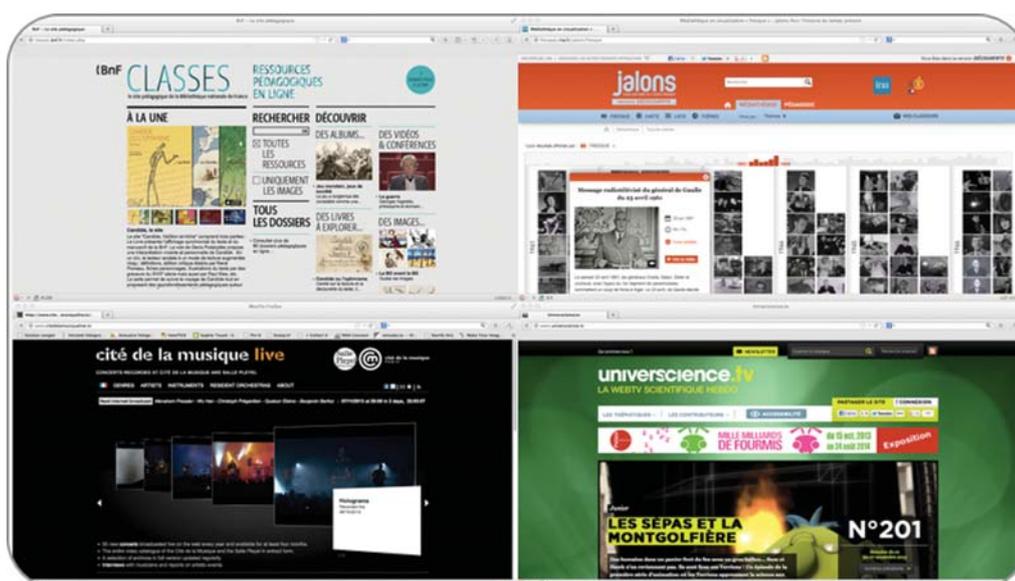


Figure 14: OER digital encyclopaedia and libraries

Free software: among the free software for creation and publication of resources Open-Sankore deserves mentioning. Intuitive and interactive, it includes several applications (annotation, drawing, audio-visual, Internet navigation) on the same screen, and functions using a pointing device. Designed for digital teaching, this software has been made to support collaborative and communicative approach.³⁹

³⁸ Accessible online at <https://candide.bnf.fr/>

³⁹ Initiated by the Interministerial Delegation on Digital Education in Africa (DIENA) which was dissolved in August 2013.

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It is free of charge, available in several languages, and offers access to resources produced by other users via an Internet gateway.

Open Courseware: This includes the whole range of resources used for a course — for example, a syllabus, presentation slides and illustrations, exercises and homework. For the teacher, it is both a source of inspiration and a tool, which simplifies the search for complementary resources. OCW enables student self-learning to be more complete, and for the student to self-evaluate their work. The OCW gateway brings together all Open Courseware of the UNTs, and those of higher education institutions involved in the movement, in total more than 23,000 resources. Teachers and students searching for OER Open Courseware in French can access this via their search engine by criteria of language at the gateway of the OpenCourseWare Consortium (OCWC).⁴⁰ Two French institutions publish their OER: ParisTech has launched its own Internet site *Libres Savoirs*, while Telecom Bretagne has launched *Savoirs Partagés*. Amongst French actors engaged in the Open Courseware movement, one should mention the University of Lyon, whose action is essentially political, themed around the promotion of Open Education. The adherence of the MESR and OIF to the Open Education is due to the University of Lyon.



Figure 15: OpenCourseWare France

3D Resources: These are educational resources, which are of interest as a simulation tool and for the conceptualisation of hidden processes. Several educational projects have been launched, such as the site *Anatomie 3D* (University of Lyon I), which deals with functional anatomy. It allows lectures to be enriched, and to widen and personalise learning for professionals and amateurs.

⁴⁰ Accessible online at <http://www.ocwconsortium.org/>

II. Perspectives of Open Education in France



Figure 16: 3D OER

Video clips and animated films: These are short films with a scenario offering a general overview to target a concept or concepts of the syllabus, in record time (2 to 15 minutes). These are essential elements of MOOCs and “flipped classroom”. These new pedagogies use two steps of “learning”: the student first watches, for example, a video at home, then knowledge is checked and followed



Figure 17: OER video clips

in the course by the teacher. These audiovisual resources are in great demand because they correspond to new modes of functioning of our society where attention rate dropped significantly. Since 2009, the site *Une minute pour comprendre* offers more than 200 lessons for the “baccalauréat” examination. Followed by over 75,000 pupils, they have been added to the Campus channel of a major French television company. In the same spirit, the NGO *Bibliothèque Sans Frontières* and the Orange Foundation have developed a French version — with subtitles — of Khan Academy, which offers already more than 250 courses following the national primary and secondary school syllabus in mathematics. Elsewhere, the WebTV of the Ministry of Agriculture (MA) has developed a series of popularised science video-clips about the great scientists — Charles Darwin, Louis Pasteur, Antoine-Augustin Parmentier, etc.⁴¹ In 2013, this initiative was awarded the prize of the best university pedagogical film — FFDA. *Les Fondamentaux* set up by MEN will soon offer more than 600 animated films that cover the whole primary school syllabus.

Massive Open Online Courses (MOOCs). They offer both educational resources in the form of Open Courseware and the support to the learning process in the form of individual or collective activities. The French offer of MOOCs is in full growth. At this time, according to the European MOOCs Scoreboard

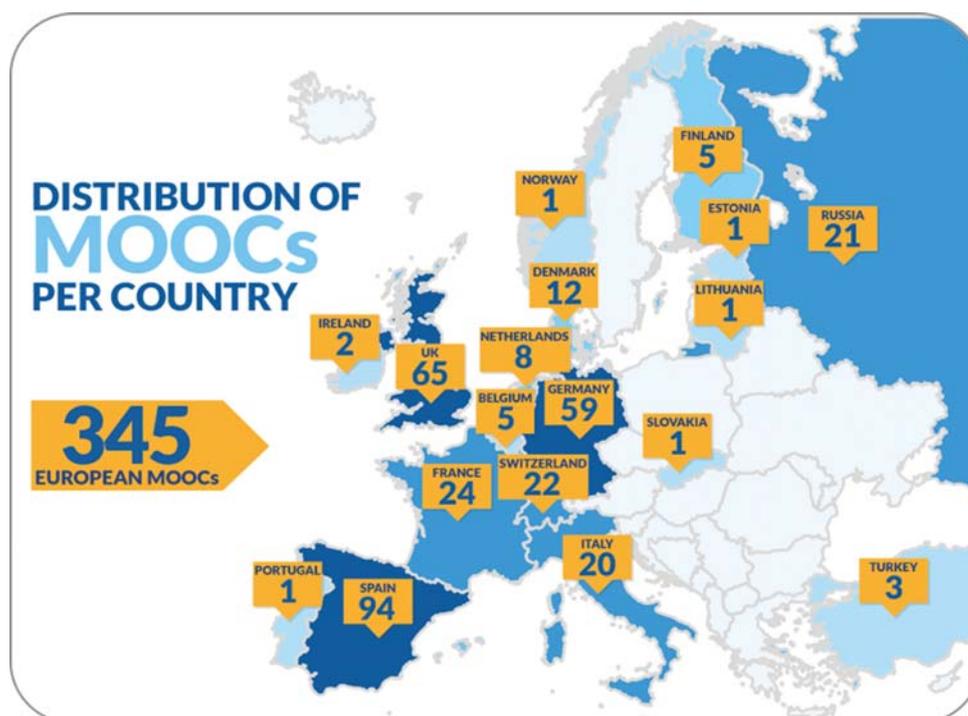


Figure 18: MOOCs in Europe — Open Education Europa

(Source: Open Education Europa, licence CC by, assessible at openeducationeuropa.eu/en/european_scoreboard_moocs)

⁴¹ Resources accessible at <http://webtv.agriculture.gouv.fr/> et sur Canal U

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observatory, there are 48 MOOCs in France, accessible via various platforms and gateways:⁴² the FUN platform by MESP, the European gateway OpenUpEd, the OCEAN⁴³ gateway of French-language MOOCs *Formation en Ligne Ouverte à Tous* (Open online training) and several start-up platforms. Start-ups like Uknow help universities and professional training institutions with MOOC production. Nonetheless, they do not always make the distinction between resources, which are free, meaning free of charge and open as OER.

A dynamic constellation of actors

This selective description highlights the availability of talent, the spirit of initiative and the density of the French system that is being created. In fact, a vast ensemble of actors, public, private and community organisations, invest in the domain of open education, each playing a specific role and putting to work their own know-how and expertise.

Firstly, the will to help and the support of the state, constitute a major advantage for the development of open education in France. Different central authorities play a propelling role by defining strategic priorities and by providing significant material and non-material support. MEN became engaged very recently in the production of OER within the structure of the “bringing the school into the digital age” strategy. The launching of 11 initiatives presented previously was made with the support of public institutions of the Ministry like the National Distance Learning Centre (CNED) and the SCEREN network, which brings together the National Centre of Pedagogic Production (CNDP) and its regional branches (CRDP). In all, MEN participated in the production of 8,500 OER. Next, parallel to the launch of the FUN platform, MESR multiplied its partnerships with organisations which promote open education. In early 2013, the Ministry became a member of the OCW Consortium and launched a French branch called OCW France.⁴⁴ The objective of this initiative is to create “referenced, deliberate and visible digital teaching, freely accessible, at the service of the students and teachers of universities”. The OER of the thematic digital universities are now accessible through this gateway. Lastly, the Ministry of Culture and Communication (MCC) has expressed the wish of the Ministry to integrate the Principles of Open Education in its policy. The strategy presented states judiciously that “public cultural data contributes to the education of all citizens, even the very youngest, acting in favour of cultural democratisation and the transmission of knowledge”. Several innovative actions were implemented: launching of 150 data games, Mashup workshops, and a Data Culture Hackathon⁴⁵. The strategy objectives are to “federate all actors” and to “construct a dynamic ecosystem of creation and innovation”, as well as “to open up access to public cultural data”. In the same spirit, the Ministry has established two partnerships: with the Open Knowledge

⁴² European Commission, “European MOOCs Scoreboard | Open Education Europa”, available at: openeducationeuropa.eu/fr/european_scoreboard_moocs

⁴³ OCEAN is a gateway of French-speaking world MOOCs available at: <http://www.ocean-flots.org/>

⁴⁴ The complete list of members engaged in the Open Education movement in France, is available at: ocwconsortium.org/members/country/France/

⁴⁵ Hackathon: portmanteau of the words “hack” and “marathon” means an event where programmers gather over a short period of time to code in collaborative mode. For other definitions, see the glossary.

Foundation (OKF) to design the public domain calculator for cultural resources and with Creative Commons France for open licences training.⁴⁶

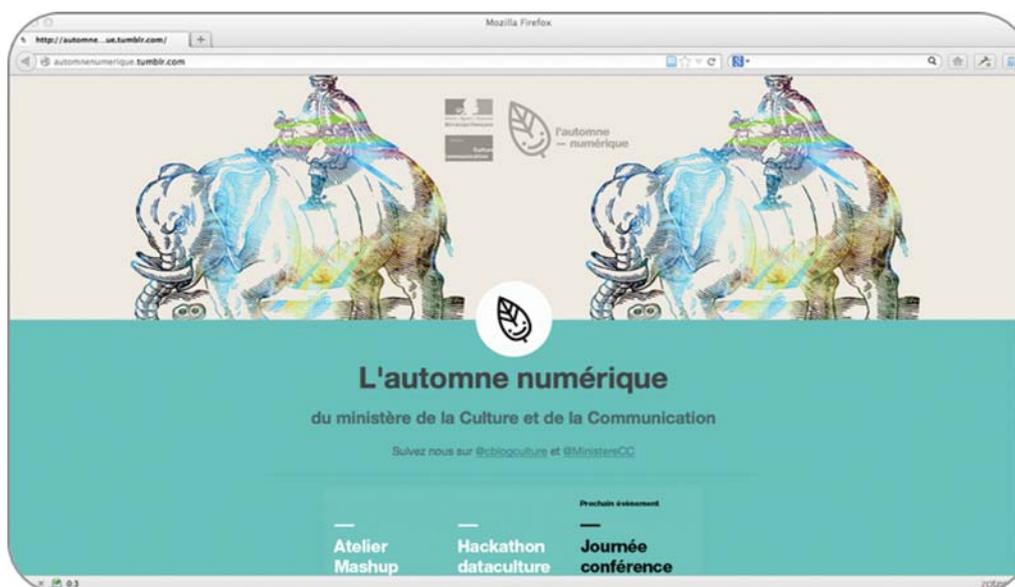


Figure 19: Mash Up workshops by the Ministry of Culture and Communication
(Source: Ministry of Culture and Communication, September 2013, automnenumérique.tumblr.com)

Secondly, the networks of community organisations play a pivotal role in the organisation and piloting of open education actions. Partnerships have been put in place. The Open Courseware movement has joined with institutional actors, notably actors from the French-speaking world, to promote the rapid expansion of Open Education. In summer 2013, the International Organisation of the French-speaking world (OIF) joined the OCW movement and engaged its two education operators — *TV5Monde* and the French-speaking world University Agency (AUF) — in the progressive conversion of their educational resources to open formats. The French-speaking Open Education community keenly awaits these resources.⁴⁷ *TV5Monde*, the major French-language television channel, with 243 million households connected in more than 200 countries, was already involved in the spirit of Open Education with its two Internet sites. *TV5Monde apprendre* (learn) and *TV5Monde enseigner* (teach), which propose a great deal of open pedagogic materials and support in five languages. However the resources developed by the AUF are traditionally sectionalised by country within which

⁴⁶ Conclusion of a historic partnership between Creative Commons France and the French Ministry of Culture to organise actions of public awareness-raising towards open licences: "These tools align with intellectual property law and fit perfectly within the minister's policy of digital inclusion as a part of its large-scale national project for arts and cultural education."; creativecommons.fr

⁴⁷ "As a member of OCWC, the Organisation Internationale de la Francophonie can be a doorway to a large number of French speaking countries, at a high political level". OCWC, Members, ocwconsortium.org

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they are open. The project PENDHA for Haiti is one example, with a recent platform designed to train Haitian teachers to use digital resources and which is not open to teachers from Africa. The white paper on digital technology of the agency published in summer 2013, talks for the first time of the OER as a factor of innovation for teaching and demonstrates the relevance of raising the awareness of the actors to favour the adoption of OER.⁴⁸



Figure 20: International Organisation of the French-Speaking World

Thirdly, and lastly, the progressive rise in interest of the private sector for the domain of open education can be remarked upon. Beyond the purely pedagogic aspect, several reasons have led to this engagement. Some businesses wish to add value to and develop their image. This is the case for the energy provider GDF Suez. It has created an Internet site called “J’apprends l’énergie” (Learning About Energy) aimed at the education community. The site hosts a large number of illustrations, entertaining animations, and virtual visits on renewable energies.

It is equally the case of the television channel CanalSat, which for two years has been offering Campus, a programme for revision assistance for the *Baccalauréat*. The objective is to acquire new subscribers by association with universities or young start-ups like *Une Minute pour Comprendre*, which has already been cited.⁴⁹ Other start-ups see the progressive creation of a market and are investing in the creation of platforms and/or services of digital accompaniment around public institutions. This is the case of

⁴⁸ AUF, (2013), Le livre blanc de l’Agence universitaire de la Francophonie sur le numérique éducatif dans l’enseignement supérieur, auf.org

⁴⁹ The television channel is only occasionally available, but the WebTV is accessible at: <http://www.canalsat.fr/pid1393-campus.html#campus-tab>

Simple IT. This start-up has developed the “Open Classrooms” platform, which offers more than 800 ICT courses. It receives more than 2 million visitors per month and has a community of 600,000 followers. The first MOOC on HTML5 had 13,500 participants in October 2013. The business model of Simple IT is based on the payment of certification and premium services — downloading e-books, live tutoring — although the courses themselves remain free of charge and accessible to all. Finally, there is *Canal Educatif* on request, a collaborative project of educational art videos in the form of surveys. Beyond the very inventive educational concept, the project innovates in several ways with the principle of public contribution by teachers and experts to co-create educational content, crowd funding and simultaneous production of educational resources in French and English.

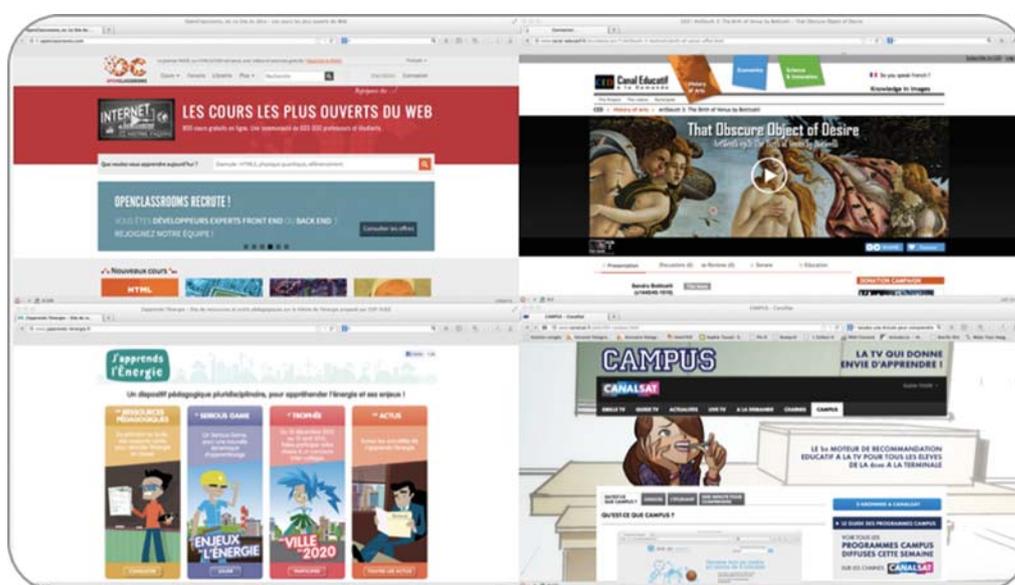


Figure 21: OER available from the private sector

II.2. Obstacles to the development of Open Education

Public policies are lacking transparency; in many ways, they are difficult to understand for the public, if not disconnected from the reality in the field.

The commitment of the Government to Open Education, and its digital ambitions, are excellent news for the development of free education. However, there are certain evidences of weak governance and poor coordination, to the point that it has become difficult to understand exactly where one is. Indeed, Government initiatives are dispersed on digital education agenda and have a tendency to overlap. Parallel to the action of the two education ministries, the “New Industrial France” plan of the Minister of Industrial Regeneration includes an E-education component. As mentioned above, the

II. Perspectives of Open Education in France

Ministry of Culture and Communication is currently developing a national project for arts and culture education. Otherwise, the ten cooperative projects that have been selected as part of the “future investment” should be mentioned. These are placed under the supervision of the General Commission for Investment, and the Prime Minister’s Services. The latter are also involved in the development of the Etalab platform and the opening-up of public data.

This absence of coordination leads to several contradictions and causes certain confusion about central questions. This confusion consists in the semantic confusion of the words “free” and the concepts of “open” and “free of charge”, the meanings of which are already very close and yet separate in meaning. The choice of “open” in English rather than “free” dates back to the “free software” movement. “Open software” was chosen instead of “free software”, which was meant to mean “free” in the sense of freedom, but could be interpreted as “free of charge”, in a commonly understood commercial sense.⁵⁰ “Free” with respect to a resource defines several characteristics, of which the first is open access; however, the question of “open access” to educational resources is not settled or simply not yet a certain fact. In announcing the Edutheque platform, MEN presented it as “a gateway of free access to digital educational resources free of author’s rights for public, cultural and scientific institutions, destined for primary and secondary teachers”.⁵¹ Two months after official launch, it appeared that not all of these “open educational resources” were open, and that access to the portal was open to teachers having an academic e-mail address. This suggests that resources can be free and closed at the same time, which is a pure contradiction.

There is equally a contradiction between the digital strategies of the two ministries, which retain their institutions within a market logic that is now questionable,⁵² and the digital policy of the Ministry of Culture,⁵³ which “means to fully support government policy in favour of the opening-up of public data and the digital data economy which is being constructed”.⁵⁴ In fact, beyond the “not” open access of the Edutheque platform, the majority of open resources — that is to say, those that are reusable courses by teachers — that it offers are cultural and scientific resources of establishments under the responsibility of the Ministry of Culture. As far as MESR is concerned, the decision to select the American technology edX for the FUN platform looks like a “kick in the face” for the “made-in-France” approach practiced by

⁵⁰ Defining the “open” by its technical characteristics tends to lessen its importance. The real motor of “openness” is freedom, a term to be taken in its civil and political sense: freedom of expression, freedom of association, freedom of activity, freedom to use information and to share it as the user wishes, to the benefit of each one and thus of all. Frédéric Couchet. *Sémantique Politique de L’informatique Libre*/April.

⁵¹ Ministère de l’Éducation Nationale, (2013), *ÉduThèque : Des Ressources Scientifiques et Culturelles Publiques Pour Enseigner*, education.gouv.fr

⁵² His answer to the question “Are exceptions to the principle of freedom from charge always legitimate with respect to the opening-up of public data?” is negative, he looks to “the transition towards new economic models [which] are urgently required, to maintain and improve the quality of public information, even to guarantee continued public service”. Rapport Trotjette (2013) is accessible at http://www.gouvernement.fr/sites/default/files/fichiers_joints/2013_08_26_-_rapport_Appendix.pdf

⁵³ Ministère de la Culture et de la Communication, (2013), *Stratégie Open Data — une politique volontariste*, cblog.culture.fr

⁵⁴ Gouvernement, (2013), *Plan D’action G8 Sur L’ouverture Des Données Publiques*, gouvernement.fr

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the Ministry for Economic Regeneration.⁵⁵ In any case, it sends inadequate signal to start-ups and the French institutions, which develop similar programmes.⁵⁶

Finally, the stability and continuity of public action are seriously called into question. Indeed, the multiplication of the effects of public announcements risk not being able to use the full potential of previous initiatives and contribute to further wastage. Furthermore, they lead to the long-term question of an extension of financing. For example, the new platform FUN naturally highlights the novelty of MOOCs using multiple media (video presentation, clearly identifiable tabs, etc.). But the references to the UNT or to *Canal U* programmes are at best discrete and at worst invisible.

It is also interesting to mention the European agenda. The spirit of competition that has prevailed since the launch of three national MOOC platforms (FUN in France, Future Learn in the United Kingdom and Iversity in Germany⁵⁷) has been to the detriment of the Community programme “Opening up Education”⁵⁸ and previous initiatives such as OpenupEd, to which MESR contributed as a partner.⁵⁹

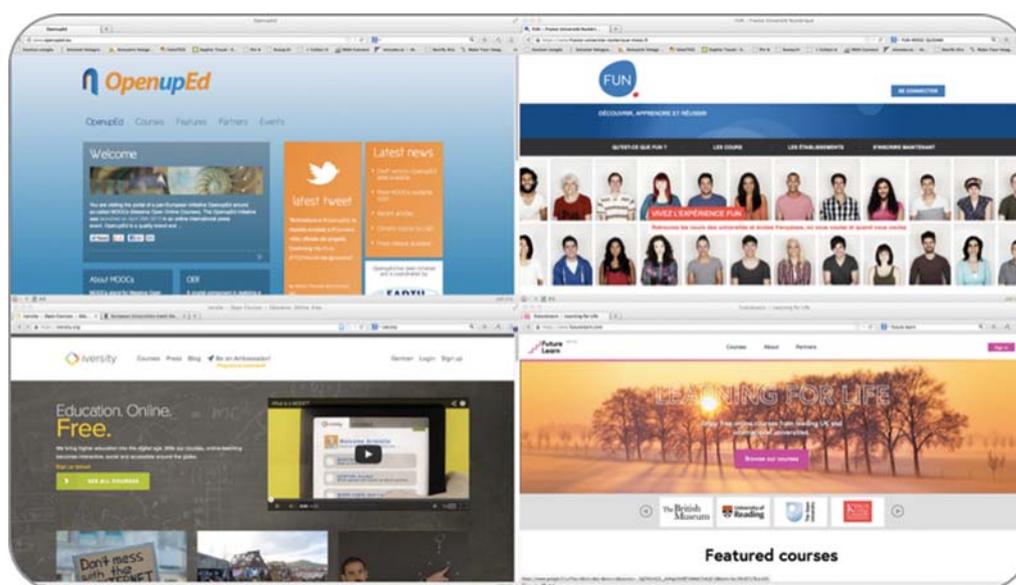


Figure 22: European MOOCs platforms

⁵⁵ Julien Dupont-Calbo (2013). Derrière le MOOC à la française, Google, Lemonde.fr

⁵⁶ SimpleIT, LIRIS, INRIA, Le projet Claire — Community Learning through Adaptive and Interactive multichannel Resources for Education, projet-claire.fr

⁵⁷ Parr, Chris, “Open University Launches British MOOC Platform to Rival US Providers | General | Times Higher Education”, n.d. timeshighereducation.co.uk/422137.article

⁵⁸ The Commission launches the “Opening Education” programme to stimulate innovation and digital competencies in schools and universities http://ec.europa.eu/education/news/20130925_en.htm

⁵⁹ Portal of a pan-European initiative OpenupEd around so-called MOOCs, openuped.eu

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For several reasons, many governmental achievements deserve to be extended in the field. First of all, French OER are not visible to the public, are largely unknown by the public and, in fact, are very seldom used by the educational community, as indicated by the few available surveys.⁶⁰ A preliminary study in 2011 showed that only 35% of the students knew about UNT; teachers were more likely to know them — 57%.⁶¹ As to the usage, only a quarter of the students and one-third of teachers reported “having already used a resource.” More recently, in 2013, a survey commissioned by the Ministry indicates that 75% of students and 58% of teachers have never heard “anyone mention” the MOOCs.⁶² Only 10% of the students and the teachers had already followed one. The net lack of reputation of French OER is also a source of questions, as it contrasts with the practices and digital aspirations of the educational community. Indeed, the use of the Internet is today massive if not total: 96% of students use Internet “very often or from time to time” for their studies and 91% of teachers use it to “prepare their courses.” Moreover, online courses, exercises and specialized units have now a number of definite followers. 94% of students and 77% of teachers want to access them via an Internet platform. Thus, the challenge of communication around the French OER is clear. The lack of calibration or rather the non-encounter between resources and users, calls for strengthening of the efforts of promotion and awareness for a clearly defined public.

In the all-digital age, material and non-material support in the field is clearly not up to the standard of stated ambitions. Digital equipment and infrastructure are regularly seen as insufficient. Amongst European countries, France is ranked 24th out of 27 in terms of school computer equipment (Fourgous, J.-M., 2012). Technical assistance, in primary, secondary and higher education teaching, is rare and leads to a certain “technical-pedagogic discomfort” when classes using digital tools are taught.⁶³ Moreover, it is clear that the education community has poor digital education training. Increased teacher training “by” and “for” digital technology has only just been taken into account by the ESPE (teacher training colleges). As far as pupils are concerned, the success rate for the B2i is “encouraging (75% in 2007) but not at all so for students, where the certification rate for the C2i — at level 1 — just reaches 36%.”⁶⁴

The Minister of Education has announced the introduction of “renewed education programs for media, information technology, and the responsible use of the Internet and social networks.” The idea of transmitting — from primary school until high school — the knowledge, rules of use, and the competencies necessary for mastering of digital technology beyond the tools is essential. But this required investment is often cited as brake, especially by teachers because it is not rewarded and even

⁶⁰ Only two studies have been identified that deal with OER awareness. They do not however deal with primary and secondary OER.

⁶¹ Anne Boyer (2011), *Les Universités Numériques Thématiques: Bilan*, Rubrique de la *Revue STICEF*, Volume 18, page 6.

⁶² OpinionWay, (2013), *Les usages pédagogiques du numérique — Enquête pour le compte du Ministère de l’Enseignement Supérieur et de la Recherche*, opinionway.fr

⁶³ “Lack of reliability of some material, the much too frequent insufficient maintenance of equipment, absence of reactive professional assistance, and a general lack of means of accompaniment”, Fourgous, J.-M., (2010) *Réussir l’école numérique*, Assemblée Nationale.

⁶⁴ Ministère de l’Enseignement Supérieur et de la Recherche, “L’observatoire Du C2i Niveau1 — Portail C2i”, c2i.education.fr

though several possibilities for encouragement, recognition and assigning value to digital education are regularly proposed, none has been applied.

Especially, the legal insecurity that surrounds the use of copyrighted content is an additional obstacle to the development of open digital education. Adjustments to the intellectual property law, such as the educational and research “exception” remain extremely complex and difficult to understand, for teachers and for students alike. The lack of intelligibility of the Act indirectly encourages civil disobedience, be it conscious or unconscious. Recent extensions to the educational exception obtained from publishing professionals appear paltry and inadequate in the digital and Internet age. What is more, in times of fiscal restraints, public authorities neglect the advantages provided by the use of open licenses.

Creative Commons licenses are of real interest for open education. Collaborative association *Sésamath*, which publishes its digital resources under Creative Commons license, is a major craze with more than 14 591 606 visits in 2012. Their digital textbooks represent 20% of the market. Finally the choice of the State of California in the United States and of British Columbia in Canada to develop textbooks under Creative Commons licenses deserves the attention of French policy-makers and could be a source of inspiration.

III.I. Structuring the French offer

The fragmented nature of the offer of open education in France needs more structure to increase its visibility. It is strongly recommended that a single gateway for digital education be created in France to enable simple access to the opulent quantity of open educational resources. The creation of the FUN platform is a salutary initiative which should aim to unite all of the open resources from teaching institutions and French public organisations, such as MOOCs, Open Courseware, OER, etc.

Recommendation No. 1: Bring together all educational, cultural and scientific open resources in one single interface.

The combination of forces appears to be essential and needs to be clearly supported by the State. In fact, French digital competitiveness depends upon strengthening interconnectivity between actors. The choice to assemble around a territorial base should be encouraged by public authorities⁶⁵, and different means of consultation should be opened to digital education actors to improve dialogue with the State⁶⁶.

Recommendation No. 2: Reinforcing the “digital ecosystem” by public support for the territorial attachment of actors and by the constitution of “creative clusters”.

Recommendation No. 3: Open up consultative means to digital promoters.

Finally, the government should explicitly state its commitment to open digital policy.⁶⁷ It is strongly recommended to the French authorities that they define a common, single digital strategy. The objective here is triple: to ensure easier understanding and better visibility of public action, guarantee continuity and better interpenetration of public policies as led by different administrative branches; lastly, to combine efforts and reduce public spending.⁶⁸

The government should undertake measures supporting the use and diffusion of open digital technology. It should envisage a more ambitious reform of the legal framework for author's rights and systematically introduce the requirement of “openness” into public calls for tender for digital projects.⁶⁹

Recommendation No. 4: Place open digital technology at the heart of government policy and create an inter-ministerial body in charge of piloting, coordinating, and following up state decision-making.

⁶⁵ The opening up of public data as an innovative socio-economic strategy. http://www.gouvernement.fr/sites/default/files/fichiers_joints/plan-action-france_version_francaise.pdf

⁶⁶ International open digital movements have representatives in France: Creative Commons FR, OpenCourseWare Europe, Open Knowledge Foundation FR

⁶⁷ The example of the Ministry of Culture and Communication and its road-map “Open Data” should be followed.

⁶⁸ Secretary-General for the modernisation of public action Mission Etalab, in charge of the opening up of public data. The gateway is at: <http://www.etalab.gouv.fr>

⁶⁹ The example of the European Commission could be followed: the EC ensures that all didactic materials produced with the support of Erasmus+ are accessible to the public under the open licence scheme, and promotes similar practices within other EU programmes.

Recommendation No. 5: Profoundly reform the legal structure of author's rights to bring it up to date with open digital technology.

Recommendation No. 6: Insist upon the opening of resources as a criterion for public calls for tender on digital projects.

III.2. Promoting public access to open digital technology

In addition to being simple tools, digital literacy and the democratisation of digital culture are important future objectives. In this respect, B2i and C2i training should become "digital driving licences" and include the central notion of "open digital technology". These evaluations, which result in a diploma, should be opened up to apprentices and the general public. Experimental activities, like Mashup and Hackaton, which were held within the "Digital Autumn", held by the Ministry of Culture and Communication, proved their capacity to make young people aware of the stakes of open digital technology. More events should be organized, and access to them needs to be opened up to all.⁷⁰

Recommendation No. 7: Promote digital literacy by managing digital and Internet passports.

Recommendation No. 8: Generalise the use of open digital technology at school, university and in professional training.

Recommendation No. 9: Pursue awareness-raising activities for the general public in line with the activities of "Digital Autumn" held by the Ministry of Culture and Communication.

Recommendation No. 10: Make institutions aware of the usage of open licences.

Parallel to this, the investment of the educational community in digital technology should be supported, recognised, and rewarded. It seems primordial to remedy the insufficiency of technical and material assistance. In fact, in France, digital learning requires a large expenditure of energy. The teachers as well as the students are too often on their own and forced to compete in ingenuity in order to use digital tools in class or to diffuse a course on the Internet. It is also advised that measures of career development be introduced both for teachers and students. Advancement for teachers should take into consideration their competencies and their engagement in the digital life of their institution. For example, it could be envisaged that the number of courses online, the number of MOOCs produced, as well as the number of students taking part in these, be cited. Diplomas should also include a digital criterion whether this be a minimal level of certification (C2i) or a separate examination.

⁷⁰ Mash up and Hackaton <http://www.culturecommunication.gouv.fr/Espace-Presses/Communique-de-presses/AuOERie-Filippetti-a-lance-le-5-octobre-dernier-l-Automne-numerique-un-evenement-destine-a-favoriser-la-creation-et-l-education-artistique-a-l-heure-du-numerique>

Recommendation No. 11: Urgently reinforce assistance and technical support in schools and in higher learning institutions.

Recommendation No. 12: Integrate digital engagement in the criteria for the evolution of teaching careers.

Recommendation No. 13: Integrate a digital criterion in the validation of diplomas.

III.3. Accepting a new model of education

Finally, and more widely, the development of open education in France raises the decisive question of learning in the digital age. By inspiring itself by European and international experience, French teaching must firstly incorporate digital and Internet rules of practice and explore their pedagogic potential.

In the first place, the working environment deserves to have a number of changes made to it to promote collaborative work and help between workers.⁷¹ The reinforcement and/or renovation of virtual communities seems indispensable, just like the creation of physical learning spaces open to all.⁷² Equipped with “life-size” technologies, they would act in favour of exchange between teachers and students, as well as pedagogic experimentation.⁷³

Recommendation No. 14: Construct digital teaching laboratories in schools and universities following European and international experience.

Recommendation No. 15: Install learning centres in universities.

Secondly, digital technology and open education have inspired new and innovative learning methods such as flipped teaching and MOOCs.⁷⁴ These models have recourse to technology to transmit the part of knowledge that requires the least teaching expertise and frees up time for interactive activity which is more efficient, and ensures more personalised supervision of students.

Recommendation No. 16: Develop the model of inverse education “flipped classes” and MOOCs, at school and at university.

⁷¹ Agora in Belgium is a place dedicated to students for learning that includes a social dimension: <http://bib.kuleuven.be/english/agora>

⁷² Lyon’s Learning labs and the MOOC factory at Lausanne are places dedicated to teachers for producing and experimenting with digital teaching. <http://learninglabeducation.com/> <http://moocs.epfl.ch/mooc-factory>

⁷³ The FabLab@School value learning by practice while our school system tends to favor theoretical knowledge. They promote problem-solving and collective intelligence. <http://fablabatschool.org/>

⁷⁴ Flipped teaching and MOOCs proposed by Americans are a revamped version of the ‘active’ methods invented by Piaget, Montessori, Freinet, and Steiner. Technology is interesting here as it offers the possibility of democratising these methods.

Thirdly, and finally, the introduction of digital technology and the Internet redefines profoundly the nature of the teacher/student relationship. It seems imperative today to have national consultation on the future of teaching, which would bring together all the actors of education, primary, secondary and of higher education.⁷⁵ There is a double objective here. On the one hand, the definition of a shared pedagogic contract that is collectively assumed is part of the sustainable maintenance of a relationship of confidence within the education community. On the other hand, the definition of indicators and regular practice of new digital practices constitutes the cornerstone of the evaluation, improvement, and readjustment of teaching missions.

Recommendation No. 17: Engage in national consultation on the future trends of development of teaching.

Recommendation No. 18: Found an observatory on the digital habits and behaviour of the student and the teacher, for primary, secondary, and higher education.

⁷⁵ Horizon 2013 presents the results of the consultation on emerging technologies and pedagogical innovations to come in education: <http://www.educause.edu/eli/events/eli-annual-meeting/2013/2013/2013-horizon-report>

Conclusion

"What Descartes did was a good step. (...)

If I have seen a little further it is by standing on the shoulders of Giants."⁷⁶

Isaac Newton, letter to Robert Hooke -1676

Openness is now recognised as of value for the modernisation of public action and a key tendency for the future of education. This is a return to primary values for France, a country that built its school in the Century of Enlightenment, which has raised education to the rank of a principle and a universal right.

France is supposed to be slightly behind in this area. If this is the case, it is less because of digital performance than because of the meaning attributed to this tool. The definition of France in open education, that is innovative and independent of market force logic, constitutes the keystone of success. French pedagogic heritage is brim-full of open resources — educational, cultural, and scientific. But neither teachers nor students know of their existence, and they don't know how to reuse them. The promotion of digital literacy appears more and more necessary as digital inequality increases disparities of competence and reinforces social inequality. The new generation must take on board the codes and rules of digital technology to be able to participate consciously in its choices and its development.

Axiomatic alignment of the values of Open Education with the future of France opens up a new horizon of possibilities, permitting everyone to stand on the shoulders of the giants that have come before us, and see further and higher than before.



Nicolas Poussin —
Paysage avec Diane et Orion 1660
[Public domain],
via Wikimedia Commons

⁷⁶ This famous quote by Isaac Newton, is based on words attributed to Bernard de Chartres by John of Salisbury, in his *Metalogicon*, which appeared in 1159: " Bernard of Chartres used to say that we are as dwarfs sitting on the shoulders of giants, so that we can see more things than they, and things at a greater distance, not at any rate by virtue of sharpness of sight on our part, or any physical excellence, but because we are assisted and lifted up by their giant size."

¹¹⁶ Nicolas Poussin, (1660-64), " Paysage avec Diana et Orion ", *Metropolitan Museum of Art*. http://commons.wikimedia.org/wiki/File%3ANicolas_Poussin_-_Landscape_with_Diana_and_Orion_-_WGA18341.jpg.

Appendices

Appendix I: Open Licence by French Government



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OCTOBER 2011



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Appendix 2: Open Education by the Ministry of Education

Académie en ligne (Online Academy)

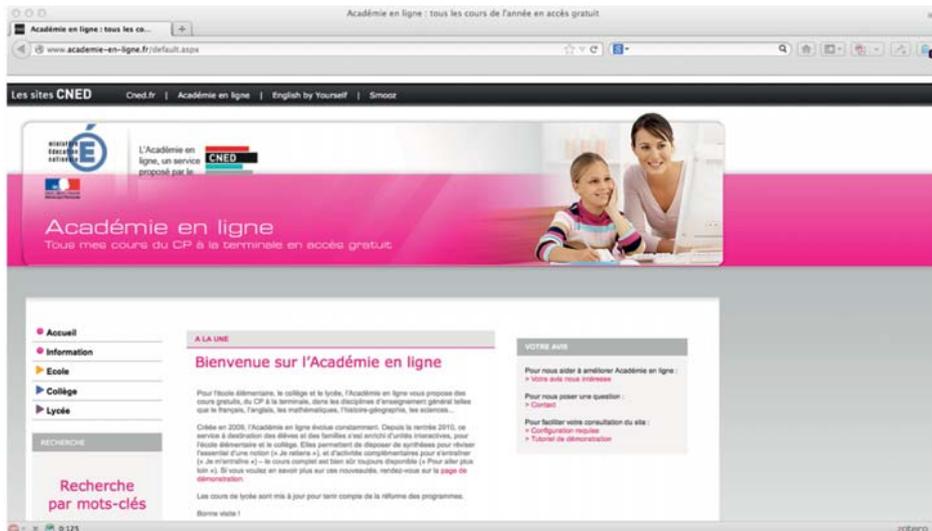


Figure 2-1 Appendix: Académie en ligne (<http://www.academie-en-ligne.fr/>)

The CNED, public institution responsible for distance teaching opens up part of its digital teaching resources on a dedicated website: L'Académie en ligne.

Start date: 2009

Objective: To offer courses free of charge for schools and high schools in general subjects, as well as summaries to revise the essential elements of a notion and complementary exercises.

Target groups: pupils

Format: pdf mainly, some interactive sequences

Licence: not specified — "The Course is the property of CNED."

Number of resources: 1792

Comments: Resources are free of charge, accessible without identification, but have no licence.

Educa sources

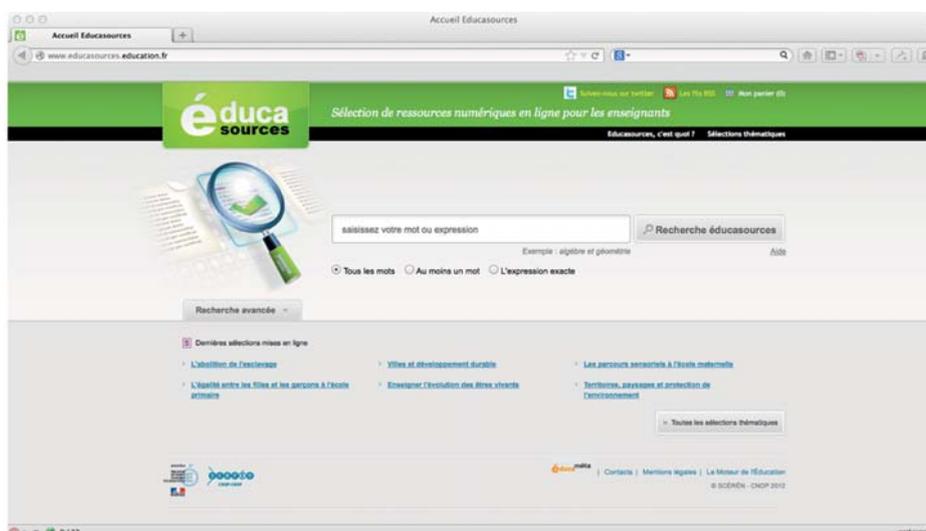


Figure 2-2 Appendix: Educa sources (<http://www.educasources.education.fr/>)

The CNDP, a MEN institution responsible for pedagogy, has created a gateway to quality digital resources, in harmony with school curricula and selected by experts and archivists.

Start date: 1997

Objective: To give teachers a search engine for pedagogic resources that have been selected and described by professionals amongst French and international websites in the domain of education, and websites of community groups with ministerial approval.

Target groups: teachers

Format: pdf, html, jpeg, mp3, videos, interactive books.

Licence: not specified — “Certain rights reserved”

Number: 5 000

Comments: Resources are free of charge, accessible without identification, but have no licence.

Lire (Read)



Figure 2-3 Appendix: LIRE (<http://www.cndp.fr/lire-au-cp/>)

Vincent Peillon, Education Minister, within the context of his digital policy proposed eleven measures towards taking schools into the digital age. Lire au CP (Read in the first year of primary school) is one of the services managed by the CNDP.

Funding: MEN — Digital Schools project

Start date: 2013

Objective: To permit parents of pupils to understand the organisation and key steps of preparatory courses (CP — first year of primary school) and teachers to understand the issues and learning structures connected to reading.

Target groups: parents, teachers

Format: pdf, html, video streaming

Licence: not specified

Number: 100 sequences

Comments: Resources are free of charge, accessible without identification, but have no licence.

English for Schools



Figure 2-4 Appendix: English for Schools (<http://englishforschools.fr/>)

The CNED, a public institution of MEN, in partnership with the British Council have created a site supporting learning English at primary school.

Funding: MEN — Digital Schools Project

Start date: 2009

Objective: to facilitate English learning at primary school by interactive sequences or videos for pupils with pedagogic sequences and advice around these resources for teachers.

Target groups: pupils and teachers

Format: interactive online sequences, PDF

Licence: Copyright CNED — British Council

Number: 250

Comments: The OER from the academic site of the CNED and the BBC resource base of the British Council are of very high quality. Resources are free of charge, accessible without identification for pupils and teachers, but have no licence.

Prep'Exam



Figure 2-5 Appendix: Prep'Exam (<http://eduscol.education.fr/prep-exam/>)

Vincent Peillon, Education Minister, within the context of his digital policy, proposed eleven measures towards taking schools into the digital age. Prep'exam is one of these services.

Funding: MEN — Digital Schools Project

Start date: 2013

Objective: to open access to previous years exam papers to facilitate their preparation for the Baccalauréat exam and to help teachers prepare exercises centred on the expectations of this exam.

Target groups: pupils, teachers

Format: pdf

Licence: not specified — "Certain Rights Reserved"

Number: 1315

Comments: The site follows the philosophy of OER and Open Data of access to public data. Resources are free of charge, accessible without identification, but have no licence.

Appendix 3: Open Education by the Ministry of Higher Education and Research

OpenCourseWare France (OCW France)



Figure 3-1 Appendix: OCW France (<http://www.universites-numeriques.fr/ocw/>)

MESR launched in 2004 the Thematic Digital Universities (UNT) to constitute referenced, visible, freely accessible digital education at the service of pupils and teachers. In 2013, it joined the Open CourseWare Consortium and published French OER through the gateway OCW France.

Funding: MESR — UNT Project

Start date: 2004 — OER production, 2013 — launch of OCW France

Objective: To present the OER produced by seven UNT and to contribute to the promotion of French higher education. The digital teaching resources have been scientifically, technically, and pedagogically validated.

Target groups: students and teachers

Format: pdf, html, mp4

Licence: CC BY

Number: 23 000 resources

Comments: The discovery of the UNT and the 23,000 educational resources that are “open” is the most striking finding of this study. The relationship with the OCW consortium has permitted the adjustments necessary for these resources to be in open format.

CERIMES – CANAL U



Figure 3-2 Appendix: CANAL U (<http://www.canal-u.tv/>)

MESR plans to set up a digital video library for higher education — Canal U — that would include audiovisual products of higher education institutions. The project involves 88 institutions and is coordinated by the Higher Education Centre for Multimedia Resources and Information (CERIMES).

Funding: MESR — UNT Project

Start date: 2000

Objective: “The objectives of Canal U are to furnish educational resource videos as well as teaching programmes and to accompany pedagogical innovation and the use of ITC in higher education. The resources have been validated by the Scientific Councils of the UNT.”

Target groups: students, teachers

Format: mp3, mp4 and streaming

Licence: not specified

Number: 10 000 resources of which one third are conference videos.

Comments: Canal-U is a success. It has over 3 million visitors per year. Resources are free of charge, accessible without identification, but have no licence. There is a new proposal from Canal U that supports the creation of MOOCs by proposing the use of Canal U channels to institutions to broadcast their videos.

AUNEGE Université Ouverte en Economie Gestion



Figure 3-3 Appendix: UNT AUNEGE (<http://www.aunege.org/>)

AUNEGE is an association of universities aimed at developing digital teaching in Economics and Management. It is one of the seven digitally themed universities founded by MESR.

Funding: MESR — UNT project co-financed by universities.

Start date: 2005

Objective: "The objective of Aunege is to aid colleagues and universities that wish to offer online courses or create partnerships. Aunege co-finances and develops digital teaching resources, making these available to users according to criteria based on principles of quality and a policy of equitable broadcast and distribution. Aunege is the showcase for French universities in Economics and Management on the net with an online professional training offer, which is constantly increasing."

Target groups: students and teachers

Format: pdf, word, ppt, jpeg, mp3, mp4

Licence: CC

Number: 2500

Comments: Some universities, such as Paris Dauphine, use these for certain courses in a format close to flipped teaching. Undergraduate students work on these courses at home online. Teachers reply to their questions on a platform for exchanges, and bring the students together regularly to update them.

UNF3S Open University of Health and Sport Sciences

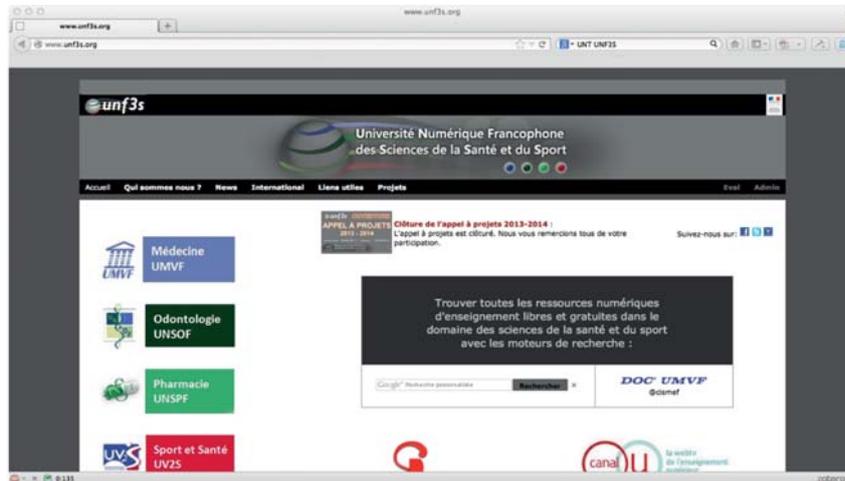


Figure 3-4 Appendix: UNF3S (<http://www.unf3s.org/>)

UNF3S is a Public Interest Group made up of four open universities: UMVF — the French-speaking Virtual Medical University, UNSPF — the French-speaking Pharmaceutical Sciences Digital University, UNSOF — the French-speaking Odontological Sciences Digital University and UV2S — Virtual University of Sports sciences. This is one of the seven UNT under the responsibility of the Ministry of Higher Education and Research.

Funding: MESR — UNT Project

Start date: 2003

Objectives: "The objectives of UNF3S are innovation in French Higher Education with OER in medicine, pharmacy, odontology, sciences and techniques of physical and sporting activities, maieutic, nursing, rehabilitation, promotion of sharing of digital resources, the creation and diffusion of quality digital educational content, teacher training, training of administrative and technical personnel, digital pedagogy; the development of international relations and the promotion of the French-speaking culture of health and sports sciences; the development of medicine, health and sports, the promotion of health education."

Target groups: students and teachers

Format: pdf, html, mp4, 3D

Licence: CC BY

Number: Over 3000

Comments: The diffusion of OER in Africa and Asia is very active, and has given rise to several partnerships with universities outside France such as the Health Programme *mère-enfant.org* (Mother-Child) and *Haiti-santé* (Haiti-Health).

UNISCIEL – Open University of Sciences



Figure 3-5 Appendix: UNT UNISCIEL (<http://www.unisciel.fr>)

UNISCIEL is a public interest group of 38 universities aiming to develop digital teaching in Sciences. It is one of the seven UNT under the responsibility of the Ministry of Higher Education and Research (MESR).

Funding: MESR + partners (Europe, businesses, regions).

Start date: 2007

Objective: to promote OER offered by its members in Fundamental Sciences, and to encourage, coordinate and support the production of new OER which have been validated technically, pedagogically, and scientifically.

Target groups: students and teachers

Format: pdf, html, mp4

Licence: CC BY-NC-ND 2.0 FR

Number: 991

Comments: UNISCIEL has integrated the global education programme *The Virtual School*, which produces French-language versions of these videos.

UNIT – Open University of Engineering and Techniques



Figure 3-6 Appendix: UNIT (<http://www.unit.eu/fr>)

UNIT is a partnership foundation involving 70 universities, Engineering Schools and businesses aimed towards the digital teaching of Engineering Science and Technology. It is one of the seven UNT under the responsibility of the Ministry of Higher Education and Research (MESR).

Funding: MESR — UNT Project

Start date: 2003

Objective: To improve the teaching quality in institutions and the success of Engineer and Technician training within the careers in this sector. To promote the value of the existing digital resources in French universities and *Grandes Ecoles* of Engineers. Also, to share innovative tools and experience.

Format: pdf, html, mp4

Licence: CC BY

Number: 2500

Comments: UNIT is also involved in other projects: e-OMED, Open Digital Space for the Mediterranean, and Utop, a demonstrator from the Open University of Technology for the distance training of Engineers and Technicians.

UOH – Open University of Humanities

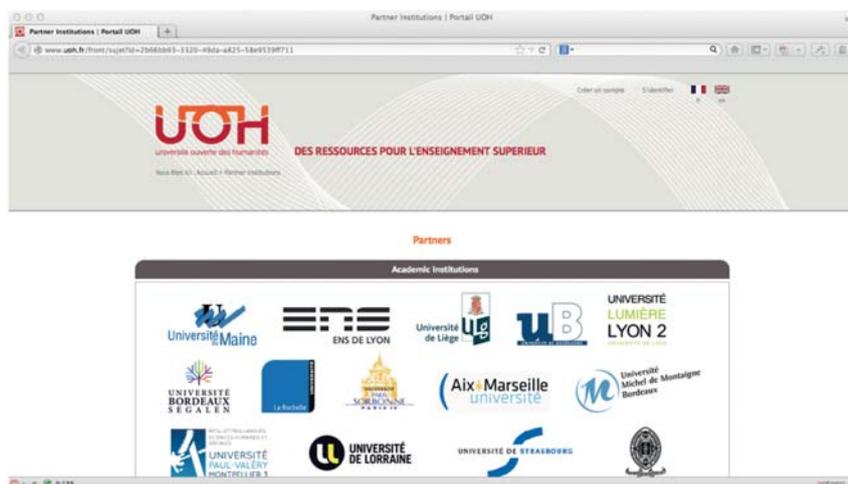


Figure 3-7 Appendix: UOH (<http://www.UOH.fr/>)

UOH is an open university dedicated to Humanities, Social Sciences, Languages, Arts, and Literature. It is one of the seven UNT created by the Ministry of Higher Education and Research (MESR).

Funding: MESR — UNT Project

Start date: 2007

Objective: To support the improved performance of students, notably undergraduates, and to contribute to the development of the French digital university. To offer open educational resources as complements and/or course materials which permit diverse forms of transmission of knowledge and which offer the possibility to all higher education institutions to construct teaching strategies. To promote the value of the digital pedagogic resources of partner institutions.

Target groups: teachers and students (potentially 425,000).

Format: pdf, html, mp4

Licence: Copyright UOH — All Rights Reserved

Number: 1200

Comments: Especially interesting are the OER called *Les Grandes Leçons* (The Great courses) an original format with great pedagogic value. The label UOH identifies the best OER, and also a policy of openness for the co-production of OER with universities outside France (Belgium and Cameroon). UOH is present on iTunes U.

UVED – Open University of Sustainable Environmentalism

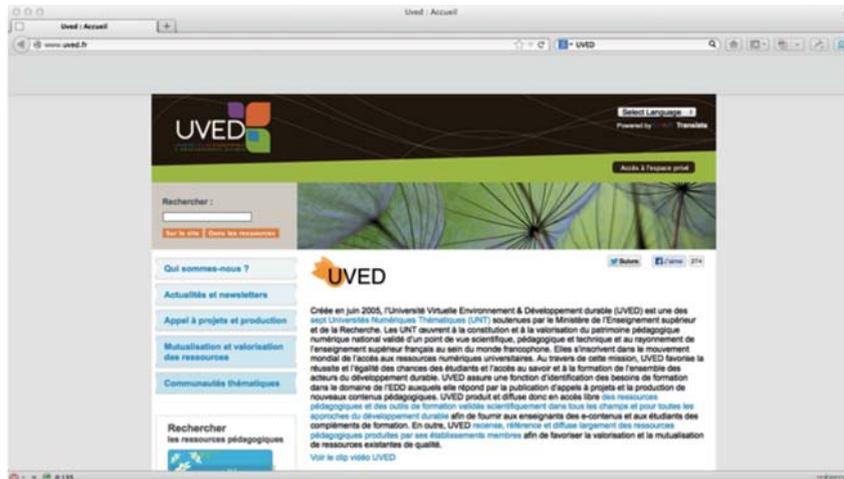


Figure 3-8 Appendix: UVED (<http://www.UVED.fr/>)

UVED is a foundation made up of partnerships between public and private institutions for the development of digital teaching for the Environment and Sustainable Development. It is one of the seven UNT under the responsibility of the Ministry of Higher Education and Research (MESR).

Funding: MESR + Foundation

Start date: 2005 — Foundation created in 2011

Objective: to make an inventory of, reference and show the value of existing OER, and finance the production of new OER. Offer teachers scientifically validated resources. Offer to students complements to courses so as to promote equal opportunity. Offer approved pedagogic content to the actors of sustainable development.

Target groups: students, teachers, universities.

Format: pdf, html, mp4

Licence: not specified

Number: More than 2000 modules

Comments: For students, new and innovative resources: Simulations, role-playing games, and case-studies; the use of social networks like Knowtex, Facebook and Twitter around a module; the will to give journalists and ordinary citizens access to resources in order for them to better understand the challenges of a society faced with environmental problems.

UNJF – French-speaking Legal Digital University – partially open

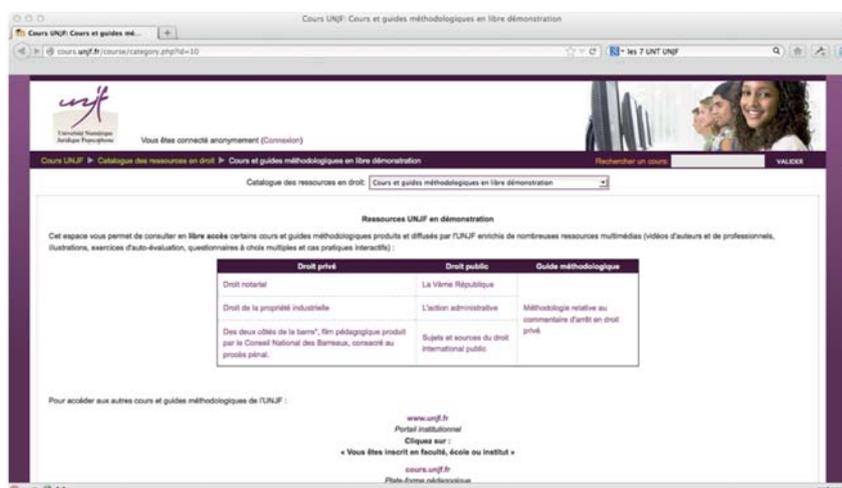


Figure 3-9 Appendix: UNJF (<http://cours.unjf.fr/course/category.php?id=10>)

UNJF is a public interest group bringing together 35 institutions as members and associated partners wishing to open access to the resources for distance teaching of the French law. It is one of seven UNT under the responsibility of MESR.

Funding: MESR

Start date: 2005

Objective: to meet the needs of distance teaching in the legal domain by promoting teaching of French law nationally and internationally.

Target groups: students, teachers, universities.

Format: pdf, html, mp4

Licence: not specified

Number: 20 modules

Comments: UNJF is the only UNT that does not publish all its courses in open format. The 20 training modules of C2i level 2 training are open.

Appendix 4: Open Repositories of Universities and “Grandes Ecoles”

OCW Paris Tech – Libre Savoirs (Open Knowledge)

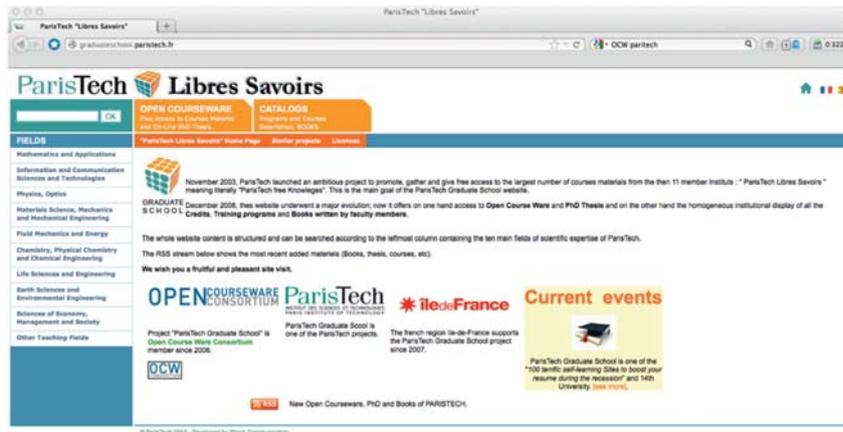


Figure 4-1 Appendix: OCW ParisTech (<http://graduateschool.paristech.fr/>)

ParisTech Institut is a consortium of 11 institutes aimed at promoting French achievements in higher education in sciences and engineering. The Open Knowledge project is designed to collect together and enable open access to the greatest number possible of course materials from member institutes, via a gateway.

Funding: Supported by the Region Ile-de-France

Start date: 2003 — Member of the OpenCourseWare Consortium since its establishment in 2006.

Objectives: Libre Savoirs (Open Knowledge) project is structured around three main objectives — to share knowledge, promote the image of ParisTech, and to encourage pedagogic innovation and quality.

Target groups: students and teachers

Format: pdf, html, mp4

Licence: a range of proprietary licences chosen by the authors.

Number: about 2000

Comments: Libre Savoirs is a pioneer in Open Education in France that is the member of the OpenCourseWare Consortium since 2006. However the choice of proprietary licences rather than open licences is confusing and only one of these licences is in open format.

OpenCourseWare of the University of Lyon (OCW Lyon)



Figure 4-2 Appendix: OCW — Université de Lyon (<http://www.universite-lyon.fr/ocw>)

The OCW Lyon project began after the conference on Open Education given by Vijay Kumar of the MIT in 2008. France was seen as being conspicuously absent, and the VetAgro Sup, one of the member institutions of the University of Lyon decided to take up the challenge to engage France in this movement.

Funding: Support of the Rhône-Alpes Region and the European Union.

Start date: Member of OpenCourseWare Consortium since 2009

Objectives: The OCW Lyon project has the double objective of making Open Education known in France, and to make known the OER produced in France. To mobilise educators so that they participate in the movement towards “opening” their digital educational resources. Also, to participate in the putting in place of a national policy of Open Education.

Target groups: educators

Licence: CC BY

Comments: OCW Lyon has played a driving role in the promotion of Open Education in France, and the recognition of France as an actor in this movement. OCW Lyon has brought the Ministry of Higher Education and Research (MESR), the International French-speaking Organisation (OIF) and Brittany Telecom (Telecom Bretagne) into the Open Education OCWC movement. Other organisations joined soon after. Although up until now its role has been essentially political, the wish of the Rhône-Alpes Region to see a regional platform should allow OCW Lyon-Rhône-Alpes to have an open education platform in 2014.

OpenCourseWare of Brittany Telecom (OCW Telecom Bretagne)

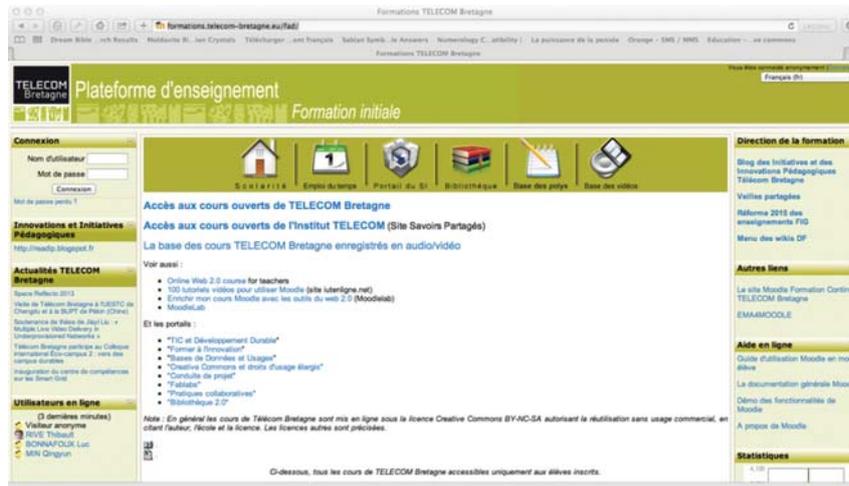


Figure 4-3 Appendix: Telecom Bretagne (<http://formations.telecom-bretagne.eu/fad/>)

Telecom Bretagne (Brittany Telecom) was inspired by MIT OpenCourseWare to produce OER and open an open courseware gateway.

Funding: Ministry of Higher Education and Research.

Start date: joined Open courseware in 2013

Objective: to contribute to the OpenCourseWare movement and promote it in France, especially with the National Digital Council, of which it is a member.

Format: html, Moodle, pdf, jpeg, mp3, videos and interactive books

Licence: CC BY-NC-SA

Number: 40 course modules

Comments: Telecom Bretagne is an example of a longstanding OER producer, which remained unidentified and which became more visible after joining the movement.

COLLÈGE DE FRANCE



Figure 4-4 Appendix: Collège de France (<http://www.college-de-france.fr/>)

Collège de France is a unique public institution of higher education established in 1530. Its motto is to “teach science in the making”. Its lectures are open access, open to all and free of charge or tuition. It wished to digitalize and put online its resources through its website and iTunes U.

Funding: Institution under the responsibility of MESR.

Start date: 2010

Objective: to take every citizen to the heart of the institution and allow them to access a very large number of courses and seminars by audio and video, as well as scientific documents and digital publications.

Target groups: students, teachers, general public

Format: pdf, html, mp4

Licence: CC BY

Number: 2000

Comments: Collège de France is as prestigious as long-lived, its charter documents recall the open spirit. It has seen the opportunity to increase the circle of its listeners through digital technology. 9 million course hours are downloaded each year. Some have English subtitles.

SILLAGES

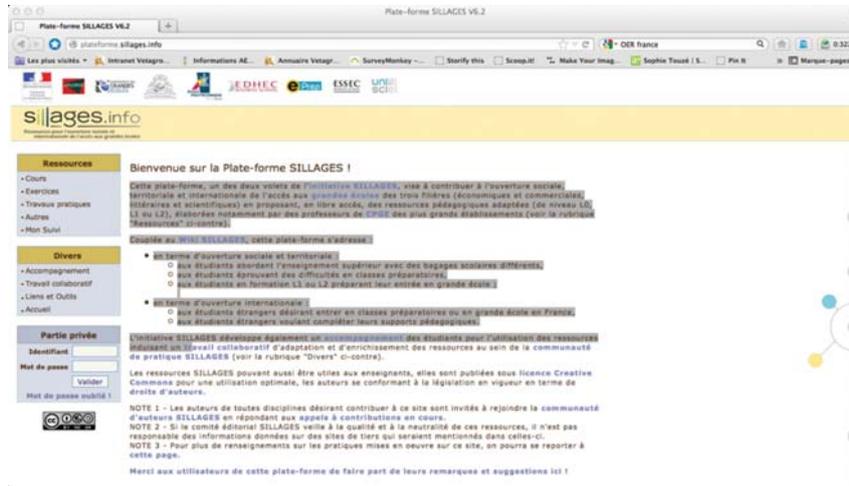


Figure 4-5 Appendix: Sillages (<http://plateforme.sillages.info/>)

SILLAGES is a non-profit-making association of *Grandes Ecoles* and partner institutions aimed towards social and international opening up of access to *Grandes Ecoles*. The SILLAGES initiative is structured around three interconnected sites: an initiative gateway, the OER platform, and the SILLAGES wiki.

Funding: MESR, the Ministry of Foreign Affairs, the Global Observatory of Teaching and Intercultural Relations (OMERIC), Francophone University Association (AUF), the Digital Thematic Universities (UNT), and the Commission for Diversity and Equal Opportunity.

Start date: 2011

Objective: to collaboratively produce education resources to improve access to the *Grandes Ecoles*; accompany with tutoring students from socially disadvantaged environments; develop specific pedagogical resources for foreign students.

Target groups: students and teachers

Format: pdf, html, mp4

Licence: CC BY NC SA

Number: 650

SESAMATH



Figure 4-6 Appendix: SESAMATH (<http://www.sesamath.net/>)

SESAMATH is an association of mathematics teachers

Funding: Subsidies (state, local authorities, etc.)

Start date: 2010

Objective: The SESAMATH association was set up to make available to all, free of charge, open pedagogic resources and open professional tools used for the teaching of mathematics. The association publishes school manuals, covering the entire national programme in secondary schools in an open format.

Target groups: pupils and teachers

Format: pdf, html, mp4

Licence: CC BY

Number: 7500 resources

Comments: A great success with 1.3 million visitors each month. In 2007, SESAMATH was awarded the UNESCO Innovation Prize.

Appendix 5: Open Repositories of the Ministry of Culture and its Partners

BnF Classes



Figure 5-1 Appendix: BnF CLASSES (<http://classes.bnf.fr/>)

The National Library of France (*Bibliothèque Nationale de France*), an institution under the responsibility of the Ministry of Culture and Communication, has created a service dedicated to pedagogical resources. This pedagogic service, for all its activities, relies upon co-operative work within the BnF (Departmental Collections, Digital Library, or Gallica, the digital library for online users, etc.), and on external partnerships with the Ministry of Education.

Funding: The Ministry of Culture and Communication with the support of the Ministry of Education

Start date: 1997

Objective: to propose to teachers and the educational community the tools aiming to facilitate access to heritage collections, to offer teachers pedagogic notes on major exhibitions. These materials and analysis of works and documents can be used as course aids.

Target groups: teachers, pupils, general public

Format: pdf, jpeg, mp3, videos, interactive books

Licence: not specified — mention of Author's Rights and reminder of current laws, including the law of exception for a brief citation and the law of pedagogic exception and their requirements.

Open Educational Resources in France: Overview, Perspectives and Recommendations

Number: More than 70 000 file pages, 40 000 commented images, thematic iconographic albums, interactive documents, audio visual materials, pedagogical ideas, workshops and games, chronologies, bibliographies, downloadable pedagogic notes, and guided research within *Gallica*.

Comments: A successful partnership placing the exceptional collection of the BnF at the disposition of teachers with very attractive resource formats such as ePub. The BnF is a partner of the eagerly awaited *Eduthèque.fr* project of the Ministry of Education. The BnF is also a partner of the Europeana project. The site is a part of the OER movement. The resources are free of charge, accessible without identification, but do not have a licence. Nonetheless, one of the other sites of the BnF (*data.bnf*) puts its resources under the CC BY licence adapted to the French law.

INA JALONS

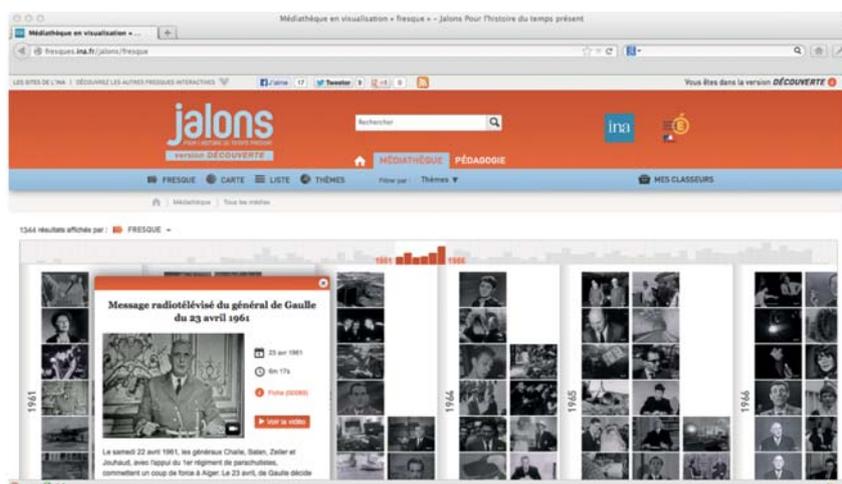


Figure 5-2 Appendix: INA Jalons (<http://fresques.INA.fr/jalons/Fresque>)

INA Jalons is a result of partnership with the Ministry of Education. This website was designed for the teaching of the 21st century history.

Funding: INA with the support of the Ministry of National Education

Start date: 2013

Objective: to make available more than 60 years of archives of filmed news, television and radio which are sources essential to the understanding of the contemporary world. Each document is accompanied by a fact sheet, historical and media context notes written by historians and the full transcript of the soundtrack. Jalons allows structuring or illustration of a course with source documents, preparing thematic presentations, and thorough image analysis.

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Target groups: teachers, students, general public

Format: pdf, jpeg, mp3, videos

Licence: not specified

Number: 1354 sequences, a hundred of courses

Comments: The interactive multimedia historical fresco is a great pedagogical resource which allows users to watch more than 1,200 videos in accordance with the curriculum, placing those documents in their historical and media context. It is regrettable that resources are not licenced and that the complete collection is not available as the partnership with *Eduthèque* suggested.

CITÉ DE LA MUSIQUE



Figure 5-3 Appendix: CITÉ DE LA MUSIQUE (<http://education.citedelamusique.fr/>)

The educational portal of the *Cité de la Musique* was designed in partnership with the Ministry of Education for teaching of music.

Funding: Ministry of Culture and Communication with the support of the Ministry of Education

Start date: 2013

Objective: "This portal allows music education to be enriched by digital resources and full references in connection with the artists of our time. These resources are linked to current artistic production and two large concert halls (the *Cité de la Musique* and *Salle Pleyel*) as well as the collection of the Museum of Music."

Open Educational Resources in France: Overview, Perspectives and Recommendations

Target groups: teachers, students, general public

Format: pdf, jpeg, mp3, videos, interactive books

License: not specified

Number: more than 45,000 resources

Comments: Live performances and multimedia listening guides are great pedagogical resources. Unfortunately those resources are not licenced and the complete collection is not available as the partnership with Edutheque suggested.

Universcience.TV



Figure 5-4 Appendix: Scientific WebTV (<http://www.universcience.TV/>)

Universcience.tv is a WebTV created by two science museums: the City of Science and Industry and the *Palais de la Découverte*.

Funding: Universcience

Objective: "Profit from the emergence of this new medium, the Internet, in an attempt to contribute, modestly and with others, to the emergence of scientific audiovisual materials universcience. TV is a new medium interconnecting the Internet, television and magazines. A totally audiovisual media, a 'weekly scientific WebTV' with the logic of a themed TV channel and programming composed of approximately 8 -programs renewed entirely every week. It also offers free of charge access to videos of exhibitions classified by themes, duration, and target audiences.

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Target groups: teachers, students

Format: streaming

License: Copyright Universcience

Number: more than 2000 videos

Comments: A successful partnership providing great pedagogical resources which improve the understanding of science. UNISCIEL is one of the few partners of *Eduthèque*, the complete collection is open. It is to be regretted that resources are not licenced, limiting the possibility of reuse and remix.

France Culture – Webcampus



Figure 5-5 Appendix: Webcampus (<http://plus.franceculture.fr/>)

France Culture, a radio station of the public group Radio France with a cultural focus, decided to offer exclusive programs for student life and courses, as well as multimedia conferences of universities and *Grandes Ecoles*. This web radio is called Campus France Culture.

Funding: Radio France

Start date: 2012

Objective: Campus France Culture offers original content, especially produced for France Culture, by and with students. It is a network of more than 25 Campus radio stations, with three weekly broadcasts, including “starting block” (a music show) and “Univox” (a magazine programme). “France Culture’s selection consists of podcasts of selected France Culture programs in all areas likely to respond directly

Open Educational Resources in France: Overview, Perspectives and Recommendations

to the needs of the students in the disciplines: science, history, philosophy, law, economy, etc., and which are also likely to meet their expectations in the field of cultural information, ideas and society, etc.

Target groups: students and teachers

Format: pdf, html, mp4

License: CC BY SA 3.0

Comments: A great initiative providing all the cultural richness of France Culture radio with guidance provided. It is to be regretted that partnerships with universities are on a one by one basis. A connection with other open education initiatives such as OCW France is recommended to provide a wider access to these resources.

UNIPOP

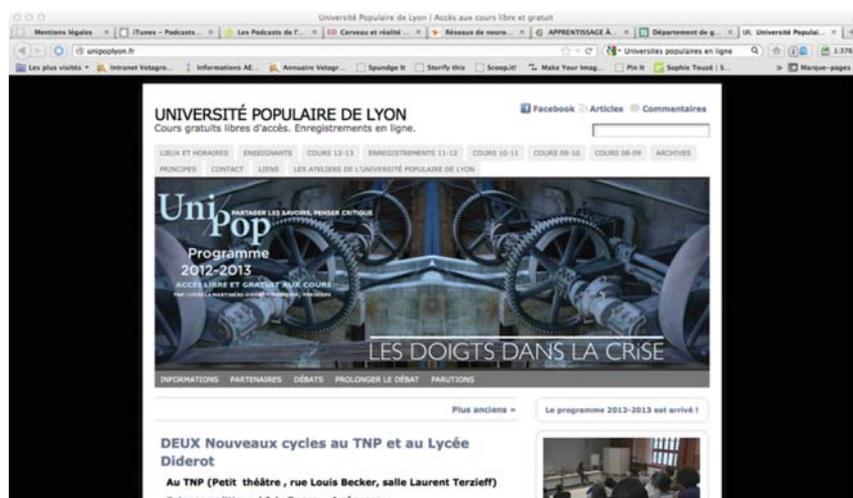


Figure 5-6 Appendix: The popular University of Lyon (<http://unipoplyon.fr/>)

Popular universities were established in 1898 to provide knowledge to adults who had not benefited from the free education established by the school laws of Jules Ferry. The concept of popular universities has since developed all over France. There are 230 popular universities in France. They have mostly a status of association and are gathered around the Association of French popular universities, an accredited national federation of youth and popular education, and a member of the European Association of Adult Education. Some open universities such as UNIPOP Lyon offer their conferences and courses online.

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Funding: Multi-partnerships, with the *Théâtre National Populaire de Villeurbanne*, the Municipal Archives of Lyon, the city of Lyon and the Rhône-Alpes region.

Start date: 2005

Objective: "Knowledge is not an object reserved for a small caste. It is a pleasure, which can be shared and transmitted. And everyone has the right to have this pleasure as they wish. In practice, however, access to this pleasure is often difficult. Knowledge is hardly ever transmitted except in places with strictly regulated access and is transmitted in a hierarchical fashion. In schools and the universities, one fights for "diplomas", those necessary safe-conducts, without which it becomes increasingly difficult to escape unemployment and exclusion. These places of teaching suffer from the restraint caused by their function of marshalling yards. They are not and cannot be open spaces, where everyone can come freely and enrich themselves. Even the knowledge that is offered in these places suffers from this, and is cramped into ever more specialised disciplines. While excessive division of labour ends up producing work on an assembly line, increasing specialization of content can eventually generate a genuine loss of meaning. To open as large a breach as possible in the walls that isolate people and knowledge, and profit from the sharing of knowledge, these are the founding ideas of the *Université Populaire de Lyon*."⁷⁷

Target groups: lifelong learners

Format: podcasts, mp3

License: not specified

Comments: about 500 courses

Notes: Courses have been offered by popular universities for over than a century, and are open to everyone free of charge without criteria of age or diploma. They are the ancestor of Open Education. UNIPOP with its privileged partnerships, National Popular Theater (*Théâtre National Populaire de Lyon*) and the Lyon archives, create events of "teaching outside the walls of institutions". Updated lessons are online on the respective sites. It is a happy mix of the formal and the informal, face-to-face and virtual education and collective intelligence at the service of knowledge for all. Awareness of technical and legal aspects would provide a wider audience access to these pedagogical resources.

⁷⁷ Philippe Corcuff and Emmanuel Dockès, "Principes", *Université Populaire de LYON*, n.d. <http://unipoplyon.fr/principes-de-l-upl>.

Appendix 6: Open Education by Private Operators

Open Classrooms



Figure 6-1 Appendix: Open Classrooms (<http://fr.openclassrooms.com>)

Following Salman Khan, Mathieu Nebra in France decided to create his own e-education site “Site of the Zero” in 1999 when he was 13 years old. The site was launched with courses suitable for beginners to learn computer science.

Funding: Private company Simple iT with four sources of financing: online advertising, paper course-books and eBooks, access to premium services in the form of subscription services and certification.

Start date: 1999 — *Site zero*, 2013 — Open classrooms

Objective: “Internet has revolutionized how we communicate, listen to music, read stories, purchase products and especially access and transmit knowledge. Open Classrooms are intended to democratize knowledge by providing another dimension to this new way of learning, democratize the sharing of knowledge, allowing the largest number to learn and teach, just simply by joining a community which participates, which cares, exchanges, debates, interacts, and that shares its knowledge. Each Member of Open Classrooms is both a student and a teacher.”

Target groups: 600 000 teachers and students

Format: eBook, pdf

License: CC

Number: 8000 courses

Comments: This site that has more than 200,000 students each month is a small company offering open and licensed educational resources. OER are available online but they are not downloadable. The

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business model of the company is charging downloads and paid certifications. With more than 10 years of existence, this company shows that a business model based around OER can work.

Open Classrooms are very actively engaged in the publication of MOOCs. Its first MOOC HTML5 on October 1, 2013 brought together 13 500 participants and is the largest French MOOC.

A Minute to Understand



Figure 6-2 Appendix: A Minute to Understand (<http://www.uneminutepourcomprendre.org/>)

Following Salman Khan, three students — Marion Vergnet, Fouques and Jeremy Lecoer — decided to promote equality via pedagogical videos online.

Funding: self-financed

Start date: 2009

Objective: "To give all students the means to reach their ambitions. Accompany the school pupil during their preparation for the *baccalauréat*. The program is treated by key points, for an innovative approach. In addition to currently used teaching methods, "A Minute to Understand" accompanies the high school student by explaining the theorems of the course through exercises."

Target groups: students

Format: video, YouTube

License: CC

Number: 200 video clips

Comments: Indicators of success of this initiative are: 75,000 student users in high schools, an award — SILLAGES 2012 — and its repurchase by the channel television Canalsat. Accounts demonstrate how effective are these video clips in accompanying students in understanding of the mathematics course.

The slogan of the initiative is simple “in maths, you can learn by heart the courses and spend hours on an exercise.”

GDF SUEZ Learn about Energy



Figure 6-3 Appendix: Learn about energy (<http://www.japprends-lenergie.fr/>)

GDF SUEZ developed an interactive educational resource “Learn about energy” to satisfy pupils’ and teachers’ needs for educative resources about energy.

Finance: GDF SUEZ

Date: 2013

Objective: “Raise awareness among children in primary and secondary school of the energy that occupies a central place in our societies and offers such challenges: preservation of resources, economic development, respect for the environment, technological innovation, etc. “Learn about energy” offers innovative resources to use or download: scenarios structured around the theme of energy can be used directly or adapted; there are exercises, quizzes, and a ‘serious game’.

Target groups: teachers, students

Format: pdf, interactive diagrams, ‘serious games’

License: not specified

Number: no information

Comments: An example of a successful partnership between industry and Open Education which offers the possibility to develop innovative pedagogical resources such as ‘serious games’, effective but expensive resources. The question of tracking down resources has to be treated in order to allow greater openness of the resources offered by private companies.

Appendix 7: Open Education for Francophonie (The French Speaking World)

OCW OIF



Figure 7-1 Appendix: OCW OIF (<http://www.francophonie.org/>)

“The word Francophonie appeared for the first time in the 1880s, when a French geographer, Onésime Reclus, used it to refer to all people and countries speaking the French language: francophone with a lower-case ‘f’ is used to designate French speaking people and Francophonie with a capital ‘F’ to designate the OIF institutional organisation dedicated to promoting the French language and cooperation between the 77 French speaking countries. The latest report from the Observatory of French, published in 2010, estimates the number at 220 million speakers spread over five continents. French is the 5th most spoken language on the planet and as English is present on five continents.

Funding: OIF

Start date: 1977 — OIF, 2013 — OCW Francophonie

Objective: to promote the French language and its diversity, linguistic and cultural support to education, training, higher education and research and the development of cooperation in the field of sustainable development, the OIF made the choice to join in 2013 the OpenCourseWare movement, and to promote the use and production of OER. The operators are AUF, University of Francophonie and the international television channel TV5Monde.

Target groups: French-speaking students and teachers

Open Educational Resources in France: Overview, Perspectives and Recommendations

Format: pdf, html, mp4, app

License: CC BY SA 3.0

Comments: Subsequent to the writing of this report, the linkage with the OCW consortium has permitted a new approach to the dissemination of French language resources and consideration of the opportunities of an OER policy.

TV5 MONDE

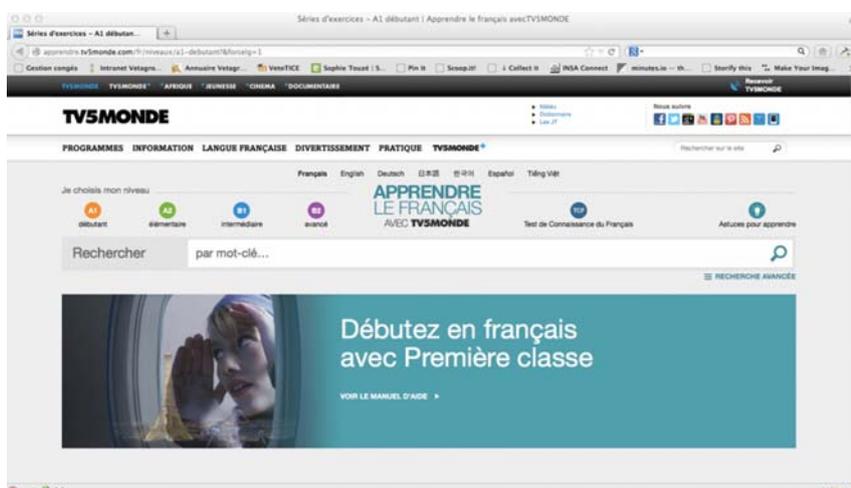


Figure 7-2 Appendix: TV5MONDE learn (<http://apprendre.tv5monde.com/>)

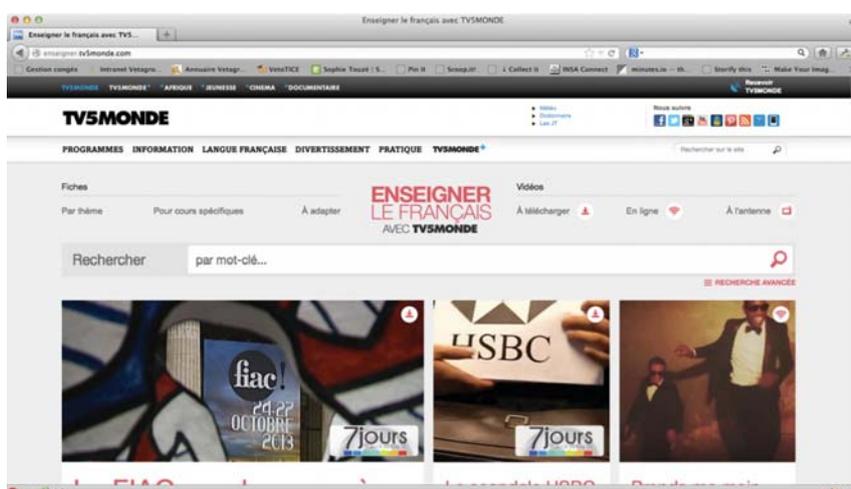


Figure 7-3 Appendix: TV5MONDE teach (<http://enseigner.tv5monde.com/>)

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TV5MONDE is one of the operators of the OIF. It was founded in Paris in 1984, following the impetus of the French Ministry of Foreign Affairs, with five public Francophone television channels: TF1, antenna 2, FR3, Radio Télévision suisse (RTS) and RTBF (TV5).

Funding: TV5MONDE, OIF, French Ministry of Foreign Affairs

Start date: 1984

Objective: The major world cultural channel of French television TV5MONDE is led by a spirit of 'international public service' which directs the channel, and offers teachers and learners of French as a foreign language a free and interactive educational device for learning and teaching French in a fun, attractive and trendy way. TV5 Monde offers a set of tools, services and educational resources, to operate the channels programmes and documents that are already available online. The objective is to enable French learning, in a classroom or autonomously. This is done through the news, European issues, geopolitical issues, or discovering a song, a work of art, a short film, a magazine of gastronomy, etc. Listening comprehension, study of vocabulary, grammar, discourse analysis or media-education are used to teach in this multimedia database.

Target groups: French-speaking students and teachers

Format: pdf, html, mp4

License: CC BY SA 3.0

Number: Hundreds of exercises classified by level language and instructional sheets; thousands of videos. The site is translated into seven languages (English, German, Korean, Spanish, French, Japanese and Vietnamese)

Comments: TV5monde has developed partnership with teaching teams of Alliances Françaises and local universities all over the world. It offers a high added value complement to the classical manuals and demonstrates the pedagogical power of new technologies at the service of training. With 241 million households receiving TV5MONDE, the potential of learners for these open online courses is great. The resources are under open licence.

Agence Universitaire de la Francophonie- Knowledge sharing

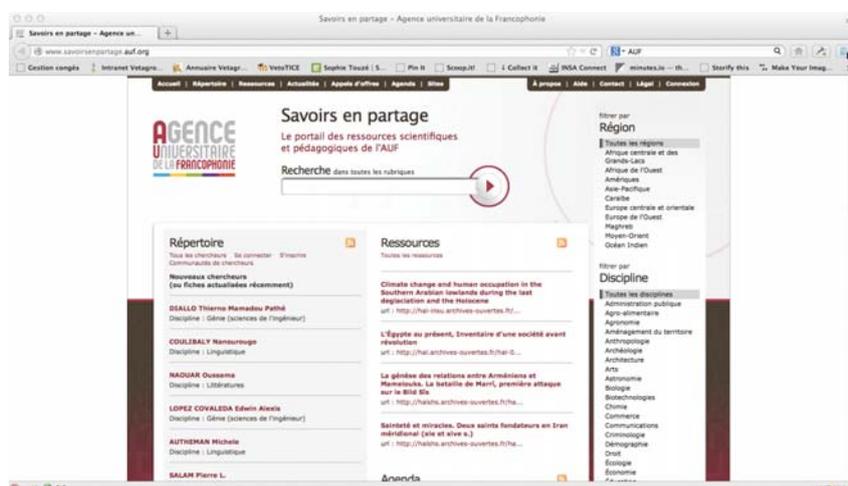


Figure 7-4 Appendix: AUF — knowledge sharing (<http://www.auf.org/>)

Agence Universitaire de la Francophonie (AUF) is one of the four operators of OIF. Founded in 1961, it is dedicated to higher education and research. AUF is an association of 739 higher education and research institutions in 94 countries.

Start date: 1989

Funding: OIF

Objective: AUF has participated for more than 20 years in the international efforts to achieve a quality basic education for all by co-producing academic training with local universities.

Target groups: teachers

Format: pdf, html

License: not specified

Number: one hundred academic training courses

Comments: Great amounts of educative resources were co-produced with local universities in the same spirit as Open Education but until 2013 the resources were not opened as OER. Joining OIF in 2013 encouraged institutions to publish on the Internet courses in open access. The gradual opening of its own resources allows the Francophone community to benefit from 20 years of production of online training. The issue of licences and the accessibility of resources to all countries are to be addressed, so that the current resources available on its platforms will be consistent with OER.

DIENA – SANKORE



Figure 7-5 Appendix: SANKORÉ (<http://sankore.org>)

During the Franco-British Summit in March 2008, the French government made a commitment to participate in education in Africa to contribute to the achievement of the UN Millenium Development Goals.

Funding: Public Interest Group for Digital Education in Africa (GIP ENA) funded by the Ministry of Foreign Affairs.

Start date: 2008

Objective: "The Sankoré program is a French government program dedicated to the development of digital education free to all and in particular in Africa. A system open to all teachers for the creation, publishing, dissemination and sharing of OER. Sankoré is open, free of charge and supports the production of OER. The digital classes program Sankoré offers equipment and training for teachers by digital means and for the production of OER."

Target groups: teachers and students

Format: pdf, sankoré format

License: CC BY

Number: 171 created resources, 6000 resources listed

Comments: With 1.3 million visitors per month, the Sankoré program demonstrates the great expectations of African countries for French OER. Note that the open Sankore software offers possibility for teachers to produce resources in their local language. Some Swahili OER have been created.

Khan Academy.FR

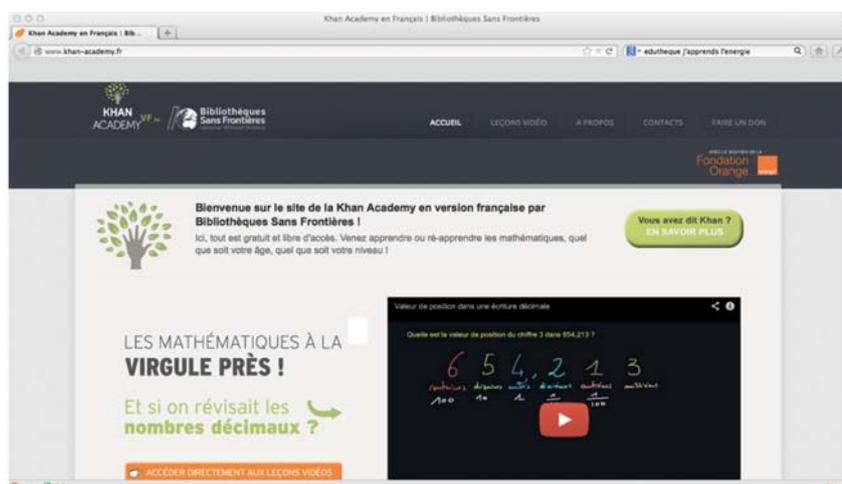


Figure 7-6 Appendix: Khan Academy .FR (<http://www.khan-academy.fr/>)

Libraries without borders is an NGO for cultural development in the francophone world. It promotes access to education and information for all with the support of libraries in France and 20 countries around the world. Close to the spirit of the Khan Academy and impressed by its phenomenal success, the project aims to provide francophones 4500 lessons online and adapt them in French.

Funding: Support of the Orange Foundation

Start date: 2013

Objective: to allow teachers to free up lectures and deliver more personalized classroom teaching. Provide support for students in difficulty, including those who do not have the opportunity to take private lessons.

Target groups: teachers, students

Format: YouTube

License: CC BY-NC-SA 3.0

Number: 800

Comments: A great idea applying the spirit of the Open Education to libraries and embracing the most innovative pedagogy of flipped education. Their motto is: "Create libraries of the future: free, connected and open to all."

Appendix 8: Multilingual Open Education

3D Anatomy



Figure 8-1 Appendix: 3D Anatomy (<http://anatomie3d.univ-lyon1.fr/>)

Origin: The Science University of Lyon produced 3D learning objects of functional anatomy for sports science students and opened them to everybody.

Finance: University of Lyon 1 — UNF3S — MESR and partners

Start date: 2009

Objective: to provide free access to resources in functional anatomy in 3D quality, free, ad-free and in compliance with the University curriculum; to combat the difficulties of students from different social backgrounds and areas and respond to their requests; to promote distance learning of anatomy.

Target groups: teachers, students

Format: video

License: CC BY NC

Number: 100 videos

Comments: One million views of videos and an award of the educational film festival. The project has plans to gradually translate its OER into five languages.

Canal Educatif – Educational channel

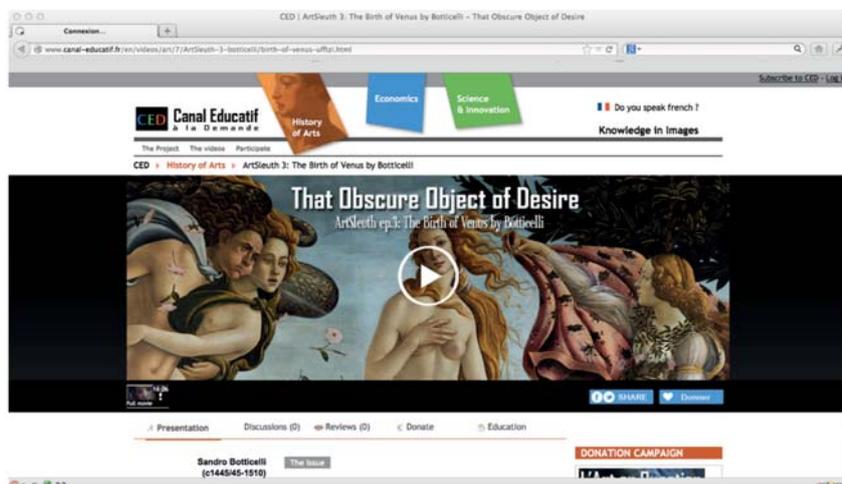


Figure 8-2 Appendix: Canal Educatif (<http://www.canal-educatif.fr/en/>)

The Educational Channel (*Canal Educatif*) is a collaborative project aimed to create the first free educational repository of educational videos for young people and their parents. Teachers, students or experts are called upon to play their role as “cultural relay runners”.

Finance: Public and private grants and support of Internet users

Start date: 1998

Objective: to democratize access to culture of science, economy and the arts to restore the meaning to knowledge. Three major issues: equal opportunities, preparation for the challenges of knowledge, and the revision of values in knowledge society.

Target groups: teachers, students

Format: video

License: not specified

Number: 36 enriched videos

Comments: The project employs the principle of involvement of the public in joint creation of educational content and crowd financing. A joint-model online OER and DVD is for sale. OER are produced simultaneously in French and English.

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Louvre – Arts Education

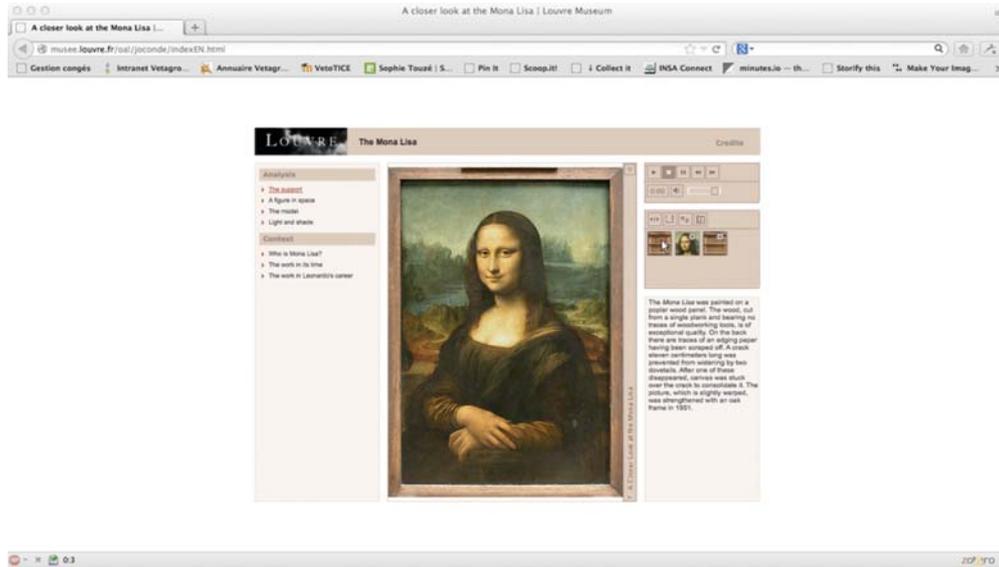


Figure 8-3 Appendix: Louvre (<http://www.louvre.fr/en/tales-of-the-museum>)

The Louvre Museum within the framework of its mission to promote arts education and French culture has developed several digital projects for Art and Education.

Finance: Louvre and patronage by the project “Operation everyone’s a patron!”

Start date: 1998

Objective: to produce interactive multimedia files, to give close up views of the details of selected works and deepen appreciation of all historical and artistic aspects through comments and animations.

Target groups: teachers, students, art lovers

Format: animation

License: not specified

Comments: An innovative approach to digital technology for the means of education. “The Louvre Talks to Children” is a delight. Note the effort to propose OER in different languages. Some resources such as “Using a Magnifying Glass” are available also in Japanese and Chinese.

EVOLUTION OF LIFE

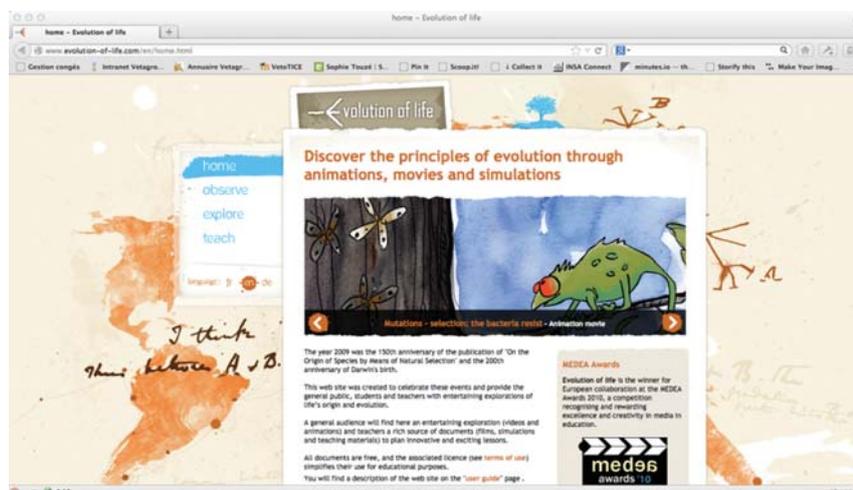


Figure 8-4 Appendix: Evolution of Life (<http://www.evolution-of-life.com/en/home.html>)

Origin: 2009 celebrated the bicentenary of the birth of Charles Darwin and the 150th anniversary of his book 'The Origin of Species'. This web site was created to celebrate the event and to offer an original way to understand the principles of evolution.

Funding: SCEREN, CNRS, LMU Munich and Volkswagenstiftung

Start date: 2009

Objective: A playful way to discover the principles of the evolution of life by Darwin (movies, simulations and teaching guides).

Target groups: teachers, students, general public

Format: animation

Type of license: CC

Comments: Evolution of life is an excellent and creative OER. It won a MEDEA award in 2010 for European collaboration. The website is available in French, English and German.

Appendix 9: French Participation in International Open Education Projects

Open Knowledge Foundation France



Figure 9-1 Appendix: Open Knowledge Foundation France (<http://fr.okfn.org/>)

The Open Knowledge Foundation (OKF) is a non-profit organisation founded in 2004 and dedicated to promoting open data and open content in all forms — including government data, publicly funded research and public domain cultural content. Open Knowledge Foundation France is the French group of OKF.

Funding: Grants and donations

Start date: 2012

Objective: to implement two flagship projects: a public domain calculator demonstrator, created in partnership with the French Ministry of Culture and Communication which to facilitate the reuse of public data and French school data and to reinforce civil society by teaching the skills necessary to reuse data.

Target groups: general public

Format: html, pdf

License: CC BY 3.0

Number: 25, including 16 in French

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Comments: Its dynamic association with over 130 local committees promotes open culture in all its forms, and can take Open Education into a broader context, beyond its usual definitions. The calculator of the public domain developed with the Ministry of Culture will be very useful to teachers.

Creative Commons France

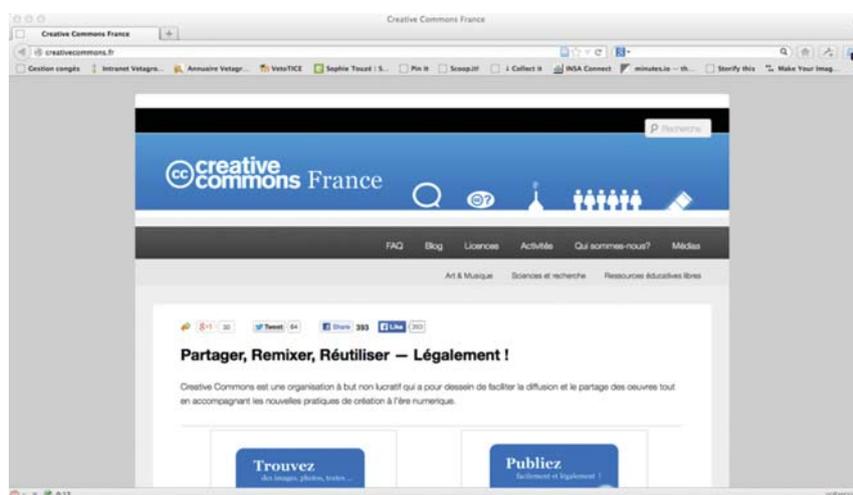


Figure 9-2 Appendix: Creative Commons France (<http://creativecommons.fr/>)

Creative Commons is a non-profit organization that facilitates the dissemination and sharing of works while accompanying the new practices of creation in the digital age. The network affiliated to Creative Commons consists of more than 100 institutions working in more than 70 jurisdictions to develop licensing and CC activities in the world. The Centre for Studies and Research in Administrative Science and Policy, a mixed-discipline unit of the CNRS/Université de Paris II (CERSA) is the institution affiliated with Creative Commons in France.

Funding: corporate and individual donations

Start date: 2001 to 2003 in France and USA

Objective: To support the global OER movement by providing a legal framework for OER. Version 4.0 of the CC licences further simplifies the use of licensing for OER. The site provides assistance in the choice of license and a search engine for OER.

Target groups: general public

Format: pdf, videos, animations, calculator

License: CC BY

Appendices

Comments: The emergence of new artistic and cultural online practices necessitates greater consideration of open licensing and in particular uses of Creative Commons licenses. In partnership with the French Ministry of Culture and Communication in 2014 a course on open licences was developed with as a main objective to support the process of artistic and cultural education. The motto is: Share, remix, reuse — legally!

OpenCourseWare Europe

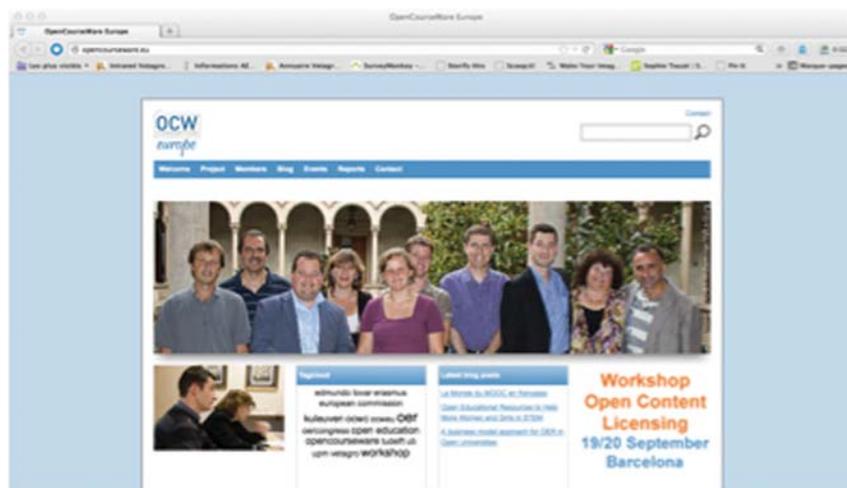


Figure 9-3 Appendix: OCW EUROPE (<http://opencourseware.eu/>)

Europe OpenCourseWare is a project supported by the European Commission to promote lifelong learning, to promote virtual mobility, using as a basis OpenCourseWare. Partners are European universities — members of the OCW Consortium, including Vetagro Sup in France.

Funding: European Union

Start date: 2010

Objectives: to formulate and promote a clear set of recommendations on how to initiate a process of Open Education and/or optimize the use of OCW. Educational, legal, political and financial aspects. Promote OER with videos and animations and launch a European University network.

Target groups: students, teachers, institutions and governments

Format: pdf, html, mp4

License: CC BY

Number: ten reports and two videos

Comments: OpenCourseWare Europe was launched in April 2014 at the OCWC conference in Ljubljana.

OPEN UP ED



Figure 9-4 Appendix: OPEN UP ED (<http://www.openuped.eu/>)

OpenupEd is the first initiative of the European MOOCs portal. Launched by the European Association of Distance Teaching Universities (EADTU), it enjoys the support of the European Commission and refers indirectly to the new opening of the European programme for education launched on September 25, 2013. It joins 11 partners including the French MESR.

Funding: European Commission

Start date: 2012

Objectives: OpenupEd was designed to meet a clear need in the world of European MOOCs with a vision beyond the production of MOOCs. This vision suggests that MOOCs should contribute to the process of opening education and educational research.

Target groups: students, teachers, institutions and governments

Format: MOOC

License: CC BY

Number: 100

Comments: The label of OpenupEd ensures that the MOOC is high-quality and free.

Learning Resource Exchange (LRE)

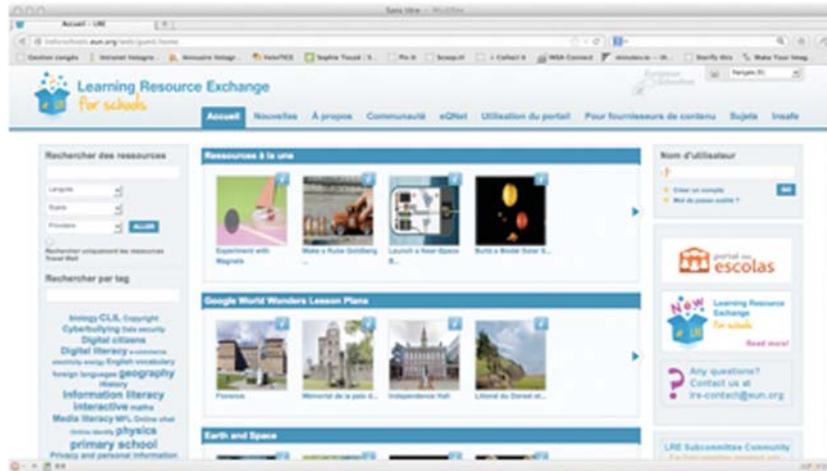


Figure 9-5 Appendix: Learning Resource Exchange (<http://lreforschools.eun.org>)

European network of 30 European Ministries of Education, whose objective is to bring innovation in teaching and learning by creating an exchange of high quality educational resources service. It is called Learning Resource Exchange (LRE).

Funding: European Commission and partners

Start date: 2010

Objectives: "The Learning Resource Exchange (LRE) allows schools to find different suppliers and educational materials in many countries. Teachers who register can also get access to the LRE social tagging tools, evaluate the LRE content, save their favourite resources and share links to resources with their friends and colleagues. European Schoolnet has noticed that some resources "travel easily" and have the potential to be used in different countries and educational settings. European Schoolnet continues the identification of resources that could be shared and reused by teachers and learners in Europe.

Coordinated by European Schoolnet, the Comenius Multilateral Network "eQNet" during the next three years will analyse the idea of 'resources travelling well' and define the quality criteria for educational resources in the repositories of LRE and the countries."

Target groups: students, teachers

Format: pdf, html, mp4, mp3

License: CC BY is the recommended license

Number: 248 000 resources including 6129 in French and 5000 localized ones.

Comments: The site supports approval for OER and organisations centred around OER, not OER production. The OER which are in French come from the CNDP and Universcience. It is a showcase of high quality we recommend in the same way as the OCW site to all public, cultural or scientific institutions as Universcience.

EUROPEANA

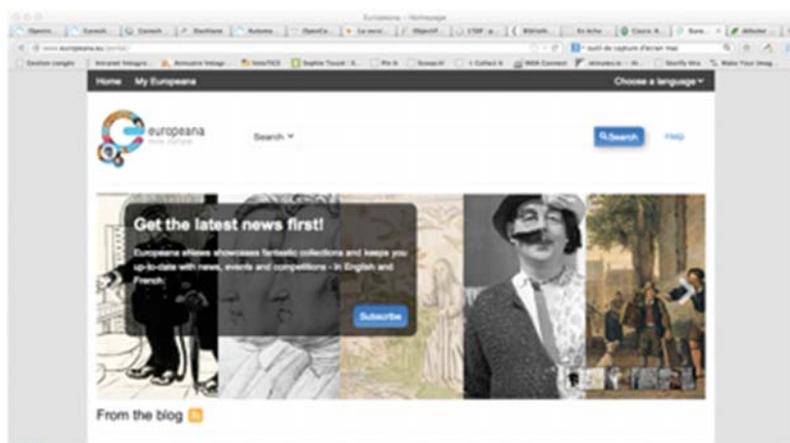


Figure 9-6 Appendix: Europeana ([http:// www.Europeana.EU/](http://www.Europeana.EU/))

Jacques Chirac (former President of France) in his letter to the six heads of governments (France, Poland, Germany, Italy, Spain and Hungary) proposed to set up a European digital library. Europeana is this project funded by the European Commission.

Funding: European Union

Start date: 2010

Objectives: "Europeana is a catalyst for change in the world's cultural heritage. The goal is to make cultural heritage accessible to all in a digital manner, to promote the exchange of ideas and information and to help better understand our cultural diversity and contribute to a thriving knowledge economy."

Target groups: librarians, students, teachers, general public

Format: jpeg, pdf, wmv

License: CC BY-NC, CC BY and public domain

Number: 29 million resources

Comments: The Europeana Portal is available in 31 languages. The French partner is the National Library of France.

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Acronyms

AUF: Agence Universitaire de la Francophonie — French-speaking University Agency

B2i: Brevet Informatique Internet — digital competency passport level 1

BAC: Baccalauréat — final secondary school exam

BnF: Bibliothèque Nationale de France — French National Library

BREVET: cf Diplôme National du Brevet (DNB)

BsF: Bibliothèque Sans Frontières — Libraries Without Borders

BY: Attribution — cf CC licence

C2i: Certificat Informatique Internet — digital competency passport level 2

CC: Creative Commons

CERSA: Centre d'Etudes et de Recherches en Sciences Administrative — Research and Studies Center of Administrative Science

CNDP: Centre National de la Documentation Pédagogique — National Teacher's Resource Centre

CRDP: Centre Régional de la Documentation Pédagogique — Regional Teacher's Resource Centre

CPGE: Classes Préparatoires aux Grandes Ecoles — preparatory classes

DNB: Diplôme National du Brevet — National School Certificate

EC: European Commission

ECDL: European Computer Driving Licence

ESPE: Ecoles Supérieures du Professorat et de l'Éducation — graduate schools of teaching

EU: European Union

FLOT: Formation en Ligne Ouverte à Tous – a French term for MOOC

FFUP: Festival du Film Universitaire Pédagogique — academic educational film festival

FR: France

FUN: France Université Numérique — French Digital University

HE: Higher Education

INA: Institut National de l'Audiovisuel- National Audiovisual Institute

ISCED: International Standard Classification of Education

IUT: Instituts Universitaires Techniques — University Technical Institutes

LMD: Licence Master Doctorat

MA: Ministère de l'Agriculture — Ministry of Agriculture

MCC: Ministère de la Culture et de la Communication — Ministry of Culture and Communication

MEN: Ministère de l'Éducation Nationale — Ministry of National Education

MESR: Ministère de l'Enseignement Supérieur et de la Recherche — Ministry of HE and Research

MIT: Massachusetts Institute of Technology

MOOC: Massive Open Online Course

NGO: Non-governmental Organisation

NC: Non-commercial CC licence

ND: Non-derivative CC

OCWC: Open Courseware Consortium

OCW: Open Courseware

OCW EU: Open Courseware Europe

OCW France: Open Courseware France

OECD: Organisation for Economic Co-operation and Development

OER: Open Educational Resources

OIF: Organisation Internationale de la Francophonie — International Organisation of Francophonie (French-speaking)

OKF: Open Knowledge Foundation

PISA: Programme for International Student Assessment

SA: Share Alike (cf CC)

SCEREN: Services Culture Editions Ressources pour l'Éducation Nationale — Publishing resources services for National Education

UK: United Kingdom

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNIPOP: Université Populaire — organisation for the education of adults

UNT: Université Numérique Thématique — Digital Thematic Universities

USA: United States of America

Glossary

Active Education: in opposition to transmissive education where the learner is passive, it means pedagogy where the learners are put in the situation of building their knowledge through research and experimentation. The teachers put their pupils/students in the role of player in their learning. This movement appeared in Europe in the last century with Piaget, Montessori, Freinet and Steiner.

Digital literacy: means the essential capability for living, learning and working in a digital society. Beyond knowledge about how to use technologies, it means digital culture in all its ethical and social aspects where citizens are responsible for their acts, not only in the real world, but also in the virtual world.

Fablab: Fabrication Laboratory is an open place for creation and manufacturing of physical objects. It provides users with advanced technologies such as 3D printers and scanners, laser cutting machines, processes, and accompaniment. The FabLab is the application of the free concept to the industrial world.

Fablab@school: a Fablab integrated into a school or university. Unlike traditional science labs where students follow a single linear process, the fablab@school offers open courses as starting points for questions. Each student draws up his own course, from the idea to the finished product. The fablab@school focuses on collaboration and creative problem solving.

Flipped education: means pedagogy where the linear model of traditional teaching is “reversed”. The student/pupil is encouraged to watch videos about fundamental concepts before the course. In the classroom, they are led to apply that knowledge to problem solving and practical work. The role of the teacher is to support students with differentiated or project-based learning activities.

Granular (Granular OER): means a pedagogical grain, i.e., smallest educational resource. “The concept of granularity refers specifically to the dimensions that an OER can have, which directly influence its educational reusability. The smaller the object, the easier it will be to combine with others and therefore more reusable.”

Hackathon: portmanteau of the words “hack” and “marathon” means an event where programmers gather over a short period of time to code in collaborative mode.

Learning Centre: means a place dedicated to students to enable them to learn in collaborative way through the realization of joint projects or viewing a number of capsules videos for a MOOC.

Learning Lab: means a place dedicated to teachers to enable them to create innovative educational resources — for example, capsules videos — and to experiment with new teaching methods such as flipped education or MOOCs.

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Mash up: means a style of artistic creation that blends existing work using digital tools, visual or sound objects and ideas from several sources. The term comes from world of music and the practices of DJs.

MOOC: means Massive Open Online Courses and the movement of opening online course modules. MOOCs offer the educational resources of a course and an accompaniment through individual or collective activities. They can lead to certification.

OER: according to the definition of UNESCO, "any type of educational materials that are in the public domain or introduced with an open license".

Open: it refers to the global opening movement. The word "Open" is often confused with the concept of "Free". "Open" is more than free access for all, it offers the ability to reuse data, see, transform and publish again.

Open courseware: refers to the movement of Open Education initiated by MIT and the OER, which are useful for a course — for example, a syllabus, presentation slides, illustrations, exercises, or homework.

Open Data: refers to the global movement of opening data.

Open Education: refers to the global movement of opening educational resources including OER, Open courseware and MOOCs initiatives.

Open Government: refers to the global movement of opening government data. It is also called Open Democracy.

Open license: means the legal tool, which once associated to a data, "opens" it. The open license allows the user to freely access this data and reuse it. There are open licenses that offer a greater degree of openness, such as transforming the data and publishing it again.