

# Why make MOOCs?

## Effects on on-campus teaching and learning

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### ABSTRACT

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Why make MOOCs? It is expensive and nobody can foresee if this tendency will last. Is it a reasonable investment for a university? What is the meaning of engaging in MOOCs? We address those questions from the point of view of a pedagogical advisor, discussing the added values of MOOCs for Higher Education, in particular through their effects on on-campus teaching and learning. Following the previous works of Docq, Lebrun & Smidts (2010), we analyze MOOCs effects through three categories and 13 criteria. While managing MOOCs as an on-campus innovative project, we show first evidences that they have a pedagogical worth.

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## Context and question

What are the pedagogical added values of MOOCs for a university such as UCLouvain? This paper discusses this question and ends up with some added values after about two years experimenting with MOOCs.

In March 2013, the Université catholique de Louvain (UCLouvain) had the opportunity to join the edX consortium as a charter member. This was the start of the Louvain moocXperience. The close output was to create and run four MOOCs on the edX platform. The Institut de Pédagogie et des Multimédias (IPM) – a teaching and learning center aiming to support faculties in quality teaching and pedagogical innovation – had been asked to support the project, helping the course teams in developing effective and reliable online courses. Quickly the question of why doing MOOCs appeared to the IPM pedagogical advisors. The purpose announced by the university board was to seize the opportunity of MOOCs to

1. rethink the forms of Higher Education, not only online but also on-campus, and
2. address this challenge within an international team of prestigious universities.

Those were the goals of the edX company (1) and they seduced the university board. The idea of seizing an opportunity was prevalent: MOOCs were new at this time but had started to make the buzz; nobody really knew what it was about and what were the stakes; the field needed to be explored... From the beginning, the intention was to experiment widely, without any specific target in mind.

There were however other points of view. Making MOOCs is expensive and some university members would have preferred to see those resources

allocated to more urgent and local learning needs. Why wasting money and time for a wide audience of learners who will never come to our campuses while our credential students need more support, more teaching assistants, better infrastructure, innovative learning methods etc.?

The managerial point of view (inviting to explore without explicit target) confronts the pragmatic point of view (wishing to answer immediate learning needs). Can MOOCs meet both? This article aims at discussing, the meaning of making MOOCs from the point of view of a pedagogical advisor. *What are the pedagogical added values of MOOCs for a university such as UCLouvain?* There is a state of uncertainty about the future of MOOCs: will they still exist in five years from now? Will they find a sustainable business model? Will they appear to offer more opportunities than threats to education? Will UCLouvain still have resources to make MOOCs in five years?... *In this state of uncertainty, what will allow us to declare, at the end of the Louvain moocXperience (no matter when the project ends up): this was worthwhile; the moocXperience has been a success?*

## Louvain moocXperience organization

The project started with the opportunity to join the edX consortium. The university board decided to build and run four MOOCs on its own financial resources. A call for projects was launched and four courses were selected out of twenty proposals. MOOCs seemed to raise the interest of UCLouvain stakeholders as a few months later, the university

got a donation allowing the extension of the project to three years with the goal to build about 14 new courses by 2016. A second call for projects was launched nine months after the first one and four new courses were selected (out of fourteen). Five other courses were added, chosen intentionally within the Louvain School of Management courses in order to offer two edX XSeries – series of coordinated courses offering a deep approach of a topic. The Louvain moocXperience is thus, at the time of writing this paper, made up of 13 MOOCs on edX out of which six have already run (once, twice or three times) and seven are in preparation for a run in 2015 (2).

Professors involved in MOOCs get a financial support allowing them to hire a teaching assistant half time during one year in order to help them prepare and run the MOOC first edition. The IPM team has been reinforced to support all the dimensions of the Louvain moocXperience: a MOOC cell of three people is dedicated to make the learning videos, train and support course teams in the instructional design of the MOOC and in the instructional design of the on-campus courses integrating the MOOCs, etc. All that allowed for three years by the donation.

## Added values of educational technology to quality of Higher Education

IPM was founded in 1995 with the aim of supporting faculties in quality teaching and pedagogical innovation, technological amongst others.

UCLouvain has a tradition of fostering pedagogical innovation through a call for project each year, allocating extra resources for innovative projects. Following the technological and societal evolution and the faculties' projects, IPM pedagogical advisors have sought to experiment with professors, to analyze, to understand, to create meaning about new uses and new tools (Lebrun & Vigano, 1995; Bousmar, Docq, Gilson et al., 1999; Docq & Daele, 2001; Lebrun, 2007; Lebrun, Docq & Smidts, 2009 etc.).

In 2010, Docq, Lebrun & Smidts determined a model of added values of "hybrid learning" for a quality Higher Education. They defined hybrid learning as a "pedagogical setup involving technology and reconfiguring the spaces and times as well as the methods of teaching and learning". This model was based on three added values categories and 13 criteria. Table 1 shows a translation into English of those. Can the added values of MOOCs be analyzed through the same criteria?

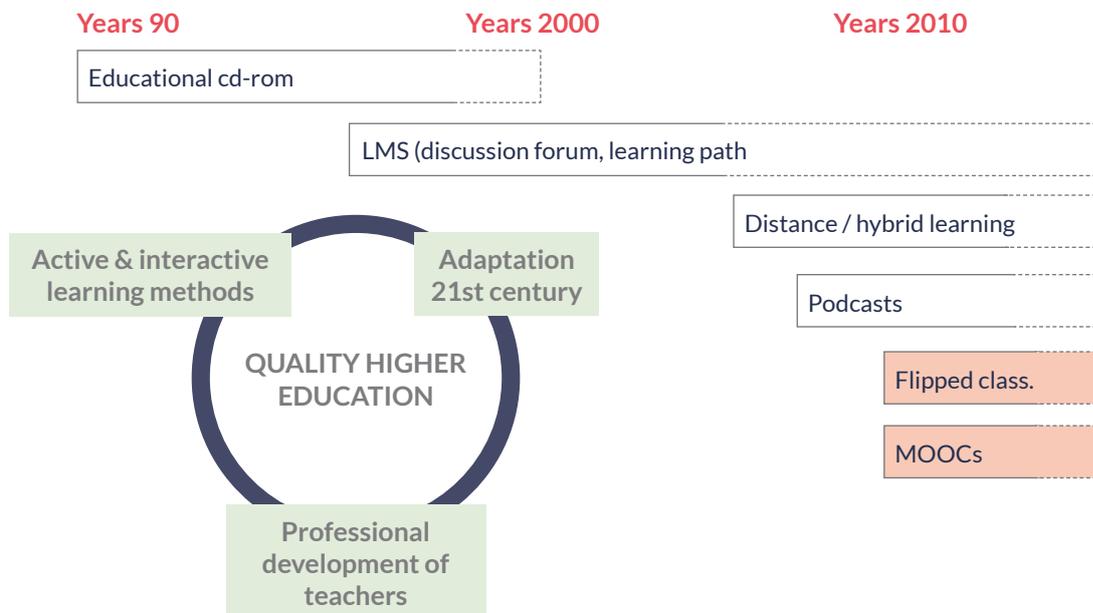


Figure 1. Three constant added values of technology for Higher Education through technological evolution

**Table 1: Added values categories and criteria**

Categories	Criteria: An hybrid course adds values if it...
Focuses on learning (rather than on teaching)	1 offers the students resources allowing deep learning
	2 makes use of the Internet to offer a worldwide opening
	3 helps students get familiar with technological tools (which are those of their future life as citizens and professionals)
	4 promote personal involvement of students into their learning
	5 boosts learning through a variety of activities
	6 fosters critical judgment by students
	7 promotes autonomous learning
	8 leads to interactive knowledge building through students
	9 maximizes interactions between professor and students to support learning
	10 allows students to produce visible signs of their learning (personal productions)
Contributes to the adaptation of university to the evolution of Higher Education context and new learning needs	11 makes use of the flexibility of online learning to answer specific learning needs (distance learning)
Fosters teachers professional development	12 makes the teacher evolve from a focus on the content to be taught to a focus on the learning process of every student
	13 contributes to build a SoTL identity by the teacher (3)

## Added values of Louvain moocXperience

Can MOOCs enter our hybrid learning added values framework and be analyzed with the same criteria? At first sight, MOOCs are not hybrid learning but real distance learning targeting learners who are not UCLouvain students. However, at Louvain, we want to consider MOOCs as one amongst others educational innovation: the main goal we defined for the whole project is that it must lead to “reconfiguring the spaces and times as well as the methods of teaching and learning” (see our definition of hybrid learning above). We want to grasp MOOCs as we grasped hybrid learning and previous educational technology before it: with the same criteria.

### Impact on on-campus teaching and learning

For the very beginning, two out of five selection criteria in the calls for MOOC projects have been linked to on- campus students:

- the MOOC should be articulated to one or several on-campus courses so that it answers specific learning needs;

- the MOOC should spread inside the UCLouvain community so that it gives pedagogical ideas to others.

Candidates had to argue how those two criteria would apply to their MOOC in the submission form. The intention of positioning MOOCs as a way of rethinking on-campus teaching and learning was explicit from the start.

Here are some examples of how the first MOOCs have been integrated with on-campus courses, linked to the added value criteria above:

1. A MOOC integrated in a first year bachelor course helps the inexperienced students (1500 of them) to organize their learning time: the weeks of the MOOC, including learning quizzes and tests, invite them to learn progressively, instead of the (wrong) habit of Belgian students of putting memorization off to the end of the semester. In addition, the quizzes allow them to train themselves several times before the exam, which is also organized with multiple-choice questions. Those students benefit also from the endlessly opportunity of re-listening to the professors explanations on the videos [criteria 1, 4, 5, 7].
2. Three MOOCs cover topics that benefit from international points of view: political science (comparing different state organizations), international human rights (discussing the

application of those rights in different countries) and the study of natural resources management linked to development (in emerging countries). Thanks to the MOOCs, UCLouvain students can share and compare opinions and examples from different parts of the world [criteria 1, 2, 6, 8].

3. Several professors have flipped the classroom during the MOOC period (6 to 8 weeks during the semester): students would discover the topics to be learnt through the MOOC and then apply their new knowledge during the classroom meeting. Professors organize debates, case analysis through small groups, deepening exercises... One of them organizes a serious game after the end of the MOOC: students have to play a board game created by the professor and then discuss the links with the theories learned in the MOOC [criteria 1, 2, 5, 8, 9, 13]. Furthermore, four professors who taught individually the same introductory course to four different on-campus groups and who are responsible collectively for a MOOC decided to design together learning scenarios to be run during the flipped classrooms sessions. Each of them decided to develop specific weekly topics, preparing dedicated flipped scenarios and leading those activities whether with their own group of students or in their colleagues' classes. For consequences, during the semester students would have 4 different professors, instead of one ordinarily, depending on each professor's scope of expertise. Besides, a peer-assessment process on teaching began between the four faculty members [criteria 12, 13].

4. One professor completely transformed his course following the first run of his MOOC. Satisfied with the results of the credential test that followed the MOOC for his residential students, he was convinced that students can validly learn the theory from the MOOC. He now delegates the theory part of the course to the MOOC and asks students to draw up clinical cases studies during the class hours, helping them developing the case by moving along work groups in the classroom [criteria 4, 7, 8, 9, 10]. He claims that he has eventually found a way to offer students the possibility of learning by doing and that time is now better used inside the classroom [criterion 12].

## Impact on teachers' professional development

Those examples of learning design transformations illustrate a move that has started by some faculties, becoming concerned about the learning process in addition to the content to be learnt. Once the videos are made, their mind becomes open to start thinking

about how students will get to master the content [criterion 12].

This concern switch is enhanced by collective training sessions offered to faculties by IPM pedagogical advisors. Professors and teaching assistants are invited to meetings:

1. to learn together a specific topic (how to create learning videos, how to assess online learning, how to flip the classroom using the MOOC or build an online community of learners...),
2. to share with their peers their MOOC design working progress.

Those workshops take place four or five times during the period of MOOCs preparation (about six months). Specific media training is also offered for those who are not comfortable with video teaching. Therefore the Louvain moocXperience is presented as an opportunity for professional development. The goal is not only to make a successful MOOC but also to develop teaching skills and to get used to facing and solving teaching issues as a UCLouvain educational team [criterion 13].

Not only course teams involved in MOOCs benefit from training sessions on MOOCs but also the UCLouvain community. Thus, in 2013-2014, the IPM organized five workshops about several stakes of MOOCs: pedagogical, economical, strategic, impact on on-campus teaching and learning etc. 97 participants attended those workshops. Those workshops were advertised through the same promotion channels as other teaching training workshops on topic such as "how to flip your classroom". Those different events has supported the same goal: give space and inform the discussion on the future of Higher Education. One of those workshops was led by some MOOCs course teams, presenting their new experience to the UCLouvain community.

The SoTL model of professional development proposes to consider teaching as a research object and invites professors to communicate about their teaching as they communicate about their research. In addition of a local communication (through the workshop mentioned above), two course teams (out of four running the first MOOCs) had papers about their MOOC presented in scientific conferences (Combefis, Bibal & Van Roy, 2014; Hamonic, Reuchamps, Schiffino et al. 2015) [criterion 13].

## Impact on adaptation of Higher Education in the 21st century

How to evaluate the impact of the Louvain moocXperience on the capacity to UCLouvain to adapt its structure, organization and curricula according to the evolution of Higher Education?

Do MOOCs help us to try to think on a prospective basis over the future of education? The single criterion proposed by Docq, Lebrun & Smidts (2010) [criterion 11] seems poor to analyze this category of added value. An update would be necessary to identify more precisely what would mean, today, "adapting to the evolution of Higher Education context". As a draft of updated criteria for this category, we propose:

### An hybrid course adds value if it...

- a) Allows distance learning for people in need for flexibility (NB: distance learning hasn't been offered by Belgian universities so far )
- b) Contributes internationalizing education (students and professors 'mobility, international exchanges and collaborations in teaching)
- c) Provides answers to the growing need for lifelong education (students of 18-25 are no longer the only target in need for Higher Education)

MOOCs seem to fit the lifelong education needs as most of the MOOC learners is an adult population already involved in professional life (Cusack, 2014). MOOCs can play a role of teaser to appeal those adult learners to online executive education certificates, as edX has started to offer [criterion c].

Besides, MOOCs allow professors to get familiar with online teaching. Gaining new skills in distance teaching was indeed one professor's personal goal while getting involved in MOOCs: she aimed to be able to reach new students in Africa (she teaches development studies) [criterion a].

Louvain moocXperience starts now to provide evidence that criterion [b] may become encountered as well, as four collaborative MOOCs involving UCLouvain are now planned (one of them has already run). Those MOOCs are built by several universities in partnership (see for example the MOOCs of the Rescif network (4)).

## Conclusion and discussion

Our starting question was whether it is significant for a university to engage in MOOCs, knowing that it is expensive and that nobody can foresee if it's a profitable investment. From the point of view of a pedagogical advisor who seeks to improve the quality of Higher Education, this investment is worthwhile provided that it has effects on

1. teaching and learning methods in favor of more active and interactive ones [criteria 1 to 10],
2. the adaptation of Higher Education to the 21st century [criterion 11],
3. faculty members' professional development [criteria 12 and 13].

After almost two years of Louvain moocXperience, we've started to see evidences of added values from this project on those three domains. We identify as a condition of those effects the need of considering MOOCs as one, amongst past and current others, opportunity of rethinking on-campus Higher Education in addition to provide a way of spreading knowledge worldwide.

Those first evidences have been gathered through frequent discussions, debriefing meetings with course teams and students and direct observations in classrooms. The next step is to deeper analyze MOOCs impacts by means of an organized evaluation research project.

Could those effects be reached by other means than MOOCs? Could other pedagogical projects, cheaper than MOOCs, allow us to reach the same effects? Probably yes but short terms elements have to be considered:

- The university got a donation specifically for MOOCs (and not for other innovation).
- Thanks to the MOOCs buzz and to the high visibility of the output (an open worldwide course), faculties are, today, more like to engage in MOOCs than in any other pedagogical innovation.
- A specific advantage of the Louvain moocXperience compared to our annual call for innovative

projects (see beginning of page 2), is that 13 course teams are involved in the same kind on innovation at the same time. That allows a real learning community between them: training together, sharing processes and outputs, evaluating effects together and comparing. This means a specific added value for faculties' professional development.

MOOCs appear to be a pedagogical development opportunity UCLouvain has the chance to seize. Would we need more reasons to engage?

### Notes

(1) <https://www.edx.org/about-us>

(2) NB: Some other MOOCs have emerged from some professors' personal network, involved in collaborative MOOCs with other universities. The Louvain moocXperience is thus actually larger than the LouvainX MOOCs on edX.

(3) SoTL – Scholarship of Teaching and Learning – is a model of teacher professional development. It proposes to consider teaching as a research object and invites professors to 1° question, analyze, make hypothesis and experiment learning methods and 2° communicate their findings publicly as they do for research.

(4) The Rescif network: <http://www.rescif.net/en/content/moocs>

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