Teaching political science with a MOOC: analyzing the supply side and the demand side

Presenters

Pierre Baudewyns
Université catholique de Louvain

Ella Hamonic
Université catholique de Louvain

Authors

Pierre Baudewyns
Université catholique de Louvain

Min Reuchamps
Université catholique de Louvain

Ella Hamonic
Université catholique de Louvain

Nathalie Schiffino-Leclercq
Université catholique de Louvain

Vincent Legrand
Université catholique de Louvain

Panel

The Times They Are A-Changin’ – MOOCS and Teaching Innovations

Keywords

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**Abstract**

Massive Open Online Courses (MOOC) have been considered by some observers as a powerful media opportunity to improve learning. The Catholic University of Louvain (UCL) was the first Belgian university to deliver a political science MOOC, in French, entitled “Discovering political science”. This MOOC brings about new challenges for both supply and demand sides.

The objective of this paper is threefold: 1- from the faculty members’ perspective to present the deep transformations in conceiving a political science introductory course for first year students. 2- to what extent introducing MOOC in the classroom affects students’ learning outcomes. 3- Finally, we also show how a MOOC can create opportunities to offer a wider variety of learning assignments, taking advantage of new media possibilities, of online peer-assessment and, in the classroom, by fostering active learning and work groups with instant feedback.
Introduction

Since 2007, free online courses intended for a broad audience – known under the acronym of MOOC (massive open online courses) – emerged in several countries around the world (Karsenti, 2013). This pedagogical turning point, which is not so recent (as argued by Gaebel, 2013), was initiated by the Siemens and Downes MOOC at the University of Manitoba in 2008 (Cassidy, Breakwell and Bailey, 2014; Toven-Lindsey, Rhoads and Berdan Lozano, 2015). While The New York Times (Pappano, 2012) qualified 2012 as “the year of the MOOC”, analyses still point out the lack of knowledge about this type of courses (Toven-Lindsey et al., 2015; Zheng, Rosson, Shih and Carroll, 2015). While some observers see MOOCs as a commitment from the learners to the learning process (Cormier and Gillis, 2010), other analysts regard with skepticism the learning methods and the ability to develop critical thinking (Allen and Seaman, 2013; Giroux, 2011). The scientific output questions, among other points, the retention rate, and connects it with the learners’ and teaching team’s involvement (Cassidy et al., 2014; Cheung, 2014; Khalil and Ebner, 2014; Onah, Sinclair and Boyatt, 2014), as well as to their motivations (El-Hmoudova, 2014; Hew and Cheung, 2014) in a critical perspective regarding the learning quality (Toven-Lindsey et al., 2015; Vallières, 2013). This is a key question for teaching political science today, as MOOCs are likely to have an increasing role in the study of political science.

This paper uses the MOOC Découvrir la science politique (Louv3x) as a case study to explore the demand side and the supply side of a MOOC that has been followed by several thousands “out of classroom” students, in three editions (spring 2014, autumn 2014 and spring 2015), and several hundreds “in classroom” students, though their regular course of introduction to political science. Because of its retention rate of 18%, the MOOC Découvrir la science politique is an exception. On the basis of the MOOC’s figures provided by several platforms (edX, Coursera, Udacity, etc.), studies show that only a few of the people who registered for a MOOC are following it until the end: some scholars put forward numbers going from 5 to 10% (Anderson, 2013; Dillenbourg, Fox, Kirchner, Mitchell and Wirsing, 2014; Gaebel, 2013), while others claim that it would be under 13% of the learners (Onah et al., 2014, p. 5825). This figure questions even more the commitment and the motivation of the learners reported in the literature, since the certificate was only granted to the registered learners achieving a success rate of at least 75%. Our argument unfolds as follows. On the one hand, we aim to contribute to the empirical studies emerging in the field of pedagogy and the university technologies (but whose data do not yet apply to political sciences teaching). On the other hand, we aim to contribute to the research on retention, commitment and motivation. These notions are furthermore often used without being defined.

Before defining, analyzing en explaining the retention rate on the basis of the MOOC Louv3x, we will first address the commonly used double approach (Fairhurst and Fairhurst, 1995): (1) the teaching team and the course structure approach, but also (2) the learners’ standard profile, their motivations and expectations, as well as the evolution of the latter (before and after the MOOC). We will demonstrate how the retention rate in a MOOC is linked to the commitment and/or the motivation of as well as the pedagogical team, as the learners, by proposing a definition of the notions.

Regarding the methodology, our analysis is based on statistical data collected throughout the MOOC, in particular thanks to a survey which was sent before and after the course to the registered learners of the three editions of the course. In total, over 15 000 students from all
over the world were invited to fill in both pre- and post-surveys. Among the registered students some 2000 of them are in classroom students who followed the MOOC as a partial requirement of their in-site course of political science at the Université catholique de Louvain (UCL), in Belgium. Simultaneously, we archived the comments that were received by email or posted on the MOOC’s forums, which will allow us to complete the analysis on the qualitative level.

1. Teaching online and on campus with MOOC: designing a new learning design experience

1.1. The necessary cohesion of a multidisciplinary team

According to Adamopoulos, the professor, his staff and, more generally, the course organization are the most important explanatory factor for the retention rate: "the more satisfied (i.e. positive sentiment) a student is with the professor, the teaching material, and the assignments, the more probable that s/he will successfully complete the course" (2013, p. 11). In our case, more than 30% of the survey’s respondents claim they felt connected with the professor(s) during the course, while approximately 90% of the participants appreciated the MOOC animation and supervision by the pedagogical staff and more than 90% of the respondents appreciated the instructional design of the lessons. Among the factors that led the newspaper Le Monde to include the MOOC Louv3x (moreover in the first place) in its selection of the ten essential MOOCs of the beginning of the 2014 academic year (Paoli, 2014), one can ask what the explanatory factors were in this decision making. It seems that the quality of a course influences more the learning of the students than the course structure. However, it seems that the construction and animation of a quality online course, giving enough support to the students, appear to be more difficult in comparison to traditional courses. Following this observation, we propose to distinguish the MOOC Louv3x’s technical dimension on one hand and its pedagogical dimension on the other hand.

This MOOC was created on the edX platform, an initiative of the Harvard University and the Massachusetts Institute of Technology (MIT) managed by a multidisciplinary team of approximately 150 individuals, based in the United States and of whom the ambition is to give the teaching staffs in the different partner countries and institutions a favourable environment for the MOOCs development. As stated by El-Hmoudova (2014, p. 31): “For universities, MOOCs offer the great potential for building and extending the university as a brand. Harvard and MIT use their edX format to showcase their world-class offerings, and the networked nature of the platform expands the reach of their courses to partners and students who might never otherwise have access”.

However, since the proposed technical device – interface design, ergonomy, users’ experience – is the same for every edX MOOC, it does not constitute a discriminatory factor while analyzing differentiated retention rates of the courses created on this platform.

Beside the technical dimension, the student-centred pedagogy in a constructivist approach (as described below) encourages their involvement (Toven-Lindsey et al., 2015, p. 1). This is a dimension we will retain. Louv3x relies on a teaching team including university professors and political sciences teaching assistants, technicians specialized in audio-visual media and Internet, as well as pedagogical advisors working with the Université catholique de Louvain. Literature documents the presence of “community TAs” (or “teaching assistants”) as increasing the learners’ motivation and the success rate because they support the professors
to ensure interactivity, which is more important in a massive online course than in a traditional course (Khalil and Ebner, 2014, p. 1241). Pedagogical foundations, like the formulation of the course outcomes, the learning outcomes (that the learners must achieve) or the retro-active effects of the MOOC on the professors’ practices, were discussed and determined in cooperation with the Institut de Pédagogie et des Multimédias (IPM), which is an expert in setting up pedagogical devices, including MOOCs. The coordinated and constant cooperation within the staff as well as with its environment resulted in the implication of “MOOC testers” with diverse profiles (in terms of gender, age and profession) and students in political sciences, before the online launching. On the one hand, they gave feedbacks leading to adjustments when and where it was necessary. On the other hand, they shared their visions of politics and, more particularly, of the MOOC’s content with the staff. The course staff permanently cares for placing the MOOC in a continuous improvement cycle on the basis of feedbacks, discussions and meetings with all the MOOC stake-holders on campus. In this perspective, the learners’ comments on the main forum also allowed improvements of the technical structure and the teaching dynamics of the course, and were regularly taken into account during the staff meetings.

1.2. Blending the MOOC course on campus: building new learning experiences for residential students

By building a MOOC, the Louv3x team aimed to achieve different goals. If the first reason of launching a MOOC has been to provide access to high quality learning resources in the French-speaking world, a strong motivation has been to experiment different pedagogies and new learning tools while being part of a collective experience organized with several colleagues.

As part of the MOOC experimentation process, teaching with MOOC on campus has been one priority for the team. For the three editions of the MOOC Louv3x online, the team simultaneously ran the course with UCLouvain residential students. The team focused attention reflecting on the way the MOOC was going to impact the traditional course. Building and designing a MOOC which is being integrated in the traditional classroom setting may create a design tension between a twofold audiences: residential students and online learners who may have different needs. The table below identifies some design constraints that may influence the MOOC development while taking into account both residential and global audience’s needs.

**Table I: Comparing MOOC global audience’s needs and UCL residential ones: How to conciliate two different audiences while designing a MOOC learning experience?**

<table>
<thead>
<tr>
<th>MOOC global audiences</th>
<th>UCL residential students</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-class presence flexibility</td>
<td>MOOC learners do not attend the in-class session, need for distance learning from wherever.</td>
</tr>
<tr>
<td>Accessibility to educational resources</td>
<td>Needed</td>
</tr>
</tbody>
</table>
### Innovative learning experiences

Need for design differentiation from other courses to match the audience who is window-shopping among dozens of other MOOCs.

Yes and No (resistance to change, MOOCs affect student learning culture disrupting entrenched habits, need for deep research and evaluation to establish learning effectiveness of innovations such as MOOC).

### Learner centric experience

MOOC student centric perspective: distance learning as the whole learning experience, it must be complete. It is a single product by itself.

Residential student centric design: need to design online resources on basis of the in-class learning experience you want to set-up. Faculty members should develop the learning scenario with the presence session as a starting point. Online resources and on campus classes are complementary to offer added value classes.

### Short deadlines

No, the demand for time flexibility is high.

Needed as an incentive for progressive learning all along the semester.

### Prerequisites

No, high demand for introductory courses.

Needed, to build knowledge upon other courses students have already attended and to fulfil programs requirements.

### University traditional calendar

No, need for mini courses between 3 and 6 weeks long with demand during summer time.

Needed, to cover the entire semester learning material (13 weeks length).

### Intellectual property

Need to get authorization to use third parties’ content.

Education exception applies on use of third parties content.

### Legal framework and administrative constraints

Credentials needed but not yet recognized. No juridical framework for certification yet.

Legal framework for certification, administrative constraints in terms of time, learning outcomes, grading policy. Credential issues in terms of recognition of hours spent by students on the course: faculty members must value intensive workload asked by the MOOC. At the same time, it’s needed to avoid grading student strategies that aim to maximize studying efforts affecting quality learning.

If the learners demands and needs drive partly the way the course has been developed, faculty members have to deal with other constraints. One of them is time (the first Edition of the MOOC has been built within a period of eight months). That’s why the team had to make series of design decisions in a short length of time before implementing the production process. In this process, the collective dynamic of discussions and content peer-evaluation (each member of the team assessed and agreed on the contents developed by their colleagues) has been essential. MOOCs entail high exposure to the public audience, there is no room for errors. Thus, developing a MOOC collectively has been one path to ensure quality and academic excellence.

#### 1.3. The reflective structure of the course

Louv3x covers a period of seven weeks (six weeks for the first and second edition). Every week mainly includes theoretical learning and application exercises (notably, in connection with the news) for the learners, on the following themes and/or notions: “What is political science?”, “State”, “Democracy”, “Ideologies”, “Political actors” and “Power”. The last week is
dedicated to the final test on the whole course. The MOOC also provides the learners with a general introduction as well as a course conclusion.

Regarding the learners’ activities, a general forum is linked to each of them in order to allow them to ask questions and to interact with each other and the teaching staff. A page listing bibliographic references supports the video content and helps the learners to go further in their learning. To reinforce the interactive dimension of the course, a “Week summary” is given to the learners through a weekly Google Hangout of one hour, during which professors answer the questions asked online or posted on the forums. The video can be watched live or deferred. The aim of this approach is to strengthen the interaction with the learners and the anchoring of the course in continuous learning.

During the week on "Power", accent was placed on the practical aspect. Concretely, the pedagogical team made and posted interviews of four actors confronted with power in their daily practice at the European level: a politician, a union representative, a journalist and a lobbyist (two women and two men). After watching the videos of theoretical courses and interviews, learners were invited to go into the field to meet actors confronted with power and to make an interview in order to hold a debate with the other learners. A methodological part on interview technique in a scientific approach and on video making was included in the MOOC.

If we look at the analysis pattern of Arbaugh and Benbunan-Fich (2006) about teaching approaches, we can draw a distinction between different teaching experiences: (1) the objectivistic-individual one (the learners receive the course material from the pedagogical team according to the design and rhythm chosen by the latest), (2) the objectivistic-collective one (the learners set up collaborative strategies within the framework of a learners community), (3) the constructivist-individual one (the learners develop their knowledge through their personal interactions with the course material), and (4) the constructivist-collective one (the learners interact with each other to build a knowledge together). The MOOC Louv3x combines dimensions from an objectivistic-individual approach (information transfer through video-lessons), with dimensions from an objectivistic-collective approach (online discussion forum), dimensions from a constructivist-individual approach (creation of a short video by every learner on the theme of power), and even dimensions from a constructivist-collective approach (even if it appeared difficult to associate learners with weekly live questions and answers sessions through the frame of Google Hangout).

Regarding the objectivistic-individual approach, the survey respondents generally indicate a positive appreciation of the workload, agenda and tone of the course, even if 20% of them negatively evaluated the workload and agenda. It has to be noted that 70% of the respondents claim they felt well-guided and knew what was expected from them. Learners were encouraged to develop cooperation strategies with each other, 25% of the respondents experienced it that way and had the feeling they were connected with other course learners. Finally, it should be emphasized that 90% of the survey respondents say they studied alone and generally at home.

Nowadays, few reported MOOCs combine pedagogical activities using diverse dynamic processes aiming to acquire knowledge and to communicate about it (Toven-Lindsey et al., 2015, p. 7). Yet, the combination of diverse operating methods for the transmission of knowledge can contribute to reinforce the involvement, and therefore the learners’ success rate.
Table II identifies examples of activities from Louv3x depending on the approach they are mainly part of. Some of them are “mandatory”; others are optional and allow the learners to go deeper, for example, through additional readings. The learners’ involvement is thus affected by a variable geometry. But, in order to “keep them clicking”, as expressed by Cassidy et al. (2014), the learners’ involvement was linked to their motivation to see themselves making progress throughout the course. By taking part to diverse activities and clicking to validate them, learners increased their rate towards certification to 75%. We will detail this evaluation in the next section.

Table II: Louv3x diverse operating methods, according to the Arbaugh and Benbunan-Fich pattern (2006)

<table>
<thead>
<tr>
<th>Epistemological dimension</th>
<th>Social dimension</th>
<th>Collective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectivistic</td>
<td>Watching a video about paradigms and the evolution of frontiers.</td>
<td>Uploading an electoral poster that illustrates an ideology and its connection with power, commenting thereon for the other learners and discussing the pictures posted by the others.</td>
</tr>
<tr>
<td>Constructivist</td>
<td>Supplying a “word-cloud” around the “politics” notion. Contributing to a wiki page, depending on one’s home country, to exchange ideas about the question: “How is your State organized?”</td>
<td>Reading extracts (commented upon by professors) from The Prince by Machiavelli, then discussing, in a critical perspective, the question: “Does the end justify the means?” Making a filmed interview (short video clip), posting it, and then reacting to comments.</td>
</tr>
</tbody>
</table>

1.4. Learning assessment

The evaluation of the learners of the Louv3x MOOC is based on three main aspects. The first one is the “active participation” (AP), which aims to really encourage the learners’ commitment through the whole course, without resorting to a directly certificate evaluation. Indeed, 50% of the final grade is given on the basis of activities’ completion, including watching videos. How is this AP measured? First of all, one point is linked to the viewing of each video, and another one is linked to the correct answer to “learning quizzes”. Moreover, each participation to an activity brings additional points. Therefore, an active follow-up gives the learner half of the necessary points to pass the MOOC. The AP can be checked during the whole course; this means that a learner who did not have the time to work during a certain week can still go back to it later and enhance his participation. In this regard, the Louv3x operated on two constraints mentioned in the literature regarding the learners: the decrease in motivation and the lack of time (Bonk and Khoo, 2014, p. 25; Khalil and Ebner, 2014, p. 1239; Onah et al., 2014, p. 5828; Zheng et al., 2015, p. 8).

The second evaluation aspect is linked to part-examinations. After each week (except for the last one), a multiple-choice questionnaire including five questions related to the week’s learning is submitted to the course participants. The MOOC’s aim being the discovery of a field through diverse operatory methods while paying attention to time management, the weekly tests only included a limited number of questions. Those questions come in addition to those...
linked to every lesson. Moreover, the initiative is being designed in both perspectives: final certification and formative experience. Learners are given the opportunity to read the part-examination’s question, and – if they feel the need to – to watch the video once again before giving their answer. Correct answers represent 25% of the final grade for the whole MOOC.

The third and last aspect includes a final examination: twenty closed-ended questions addressing the whole course material in a random order. The massive nature of online courses involves computerized evaluation modalities (Vallières, 2013, p. 1), but it may also allow the learners to communicate with each other to answer the tests. Concerning the automatic corrections, the examination – like every other quiz and test – adds an explanation for the answer to the computerized correction (which directly indicates if the answer is correct or not) in order to reinforce the pedagogical dimension. Regarding the transmission of answers between learners, the teaching team decided to place this initiative in a formative perspective. Besides, the edX platform addresses more the ID verification modalities for the certificates than the individual assessment completion. Today, MOOCs bring out a dilemma for the pedagogical staff, which has to choose between control and collective construction of knowledge.

In a general way, Louv3x evaluation method is therefore aimed at rewarding every learner’s participation. Some studies showed that learners rarely participate to interaction activities, except if those are designed to improve their final grade, which is the case here (Karsenti, 2013).

Indeed, with few exceptions, every activity on the platform contributes to the final grade for the acquisition of the certificate, which motivates the learners to participate more. However, it can lead to perverse effects. When the learners are, for example, obliged to take part in some discussions on forums, initiated by questions (e.g. “Are you for or against the obligation to vote?”), they may be tempted to answer the question briefly, without taking the other answers already posted into account. This can also be explained by the difficulty to follow the discussion thread in which hundreds of learners are already taking part. On a technical level, few solutions are already available to branch the interventions of thousands of learners. In any case, this may lead to a situation where everyone speaks, but where only a few people listen to the others. We can finally find that most of the learners do what they are asked to do, no more, no less. This observation is similar to the study led by Karsenti, Lepage and Gervais (2002).

2. Passive retention and active retention

Starting from those observations, we address an issue often raised in the literature about MOOCs: the choice of indicators to measure the success or failure of a MOOC and in particular of the learners registered for a MOOC. Universities often use the number of enrolled participants to evaluate the success of their training opportunities. Nevertheless, registering for a MOOC is a relatively easy process for someone who can access the Internet and does not consider it as a full learning process. We can compare this to the act of taking a book in a bookshop, having a look at it, then putting it back on the shelf where it comes from. To go beyond this observation, the MOOC Louv3x seized the opportunity to collect data by submitting a questionnaire to people who enrolled for the MOOC, in order to evaluate the participants’ profiles, their representation of the course, their degree of involvement, their expectations and the means they used to follow the course.
In the first edition, 6470 invitations to answer the questionnaire were sent, and 1593 learners answered to the survey in the beginning of the course (response rate: 24.6%). At the end of the course, 1426 of the 7667 learners answered the survey (response rate: 18.6%). Response rates are 29% for edition 2 and 21% for edition 3. We could observe some attrition in the sample because some of the respondents answered the survey in the beginning and at the end of the course, while others only answered the questionnaire in the beginning of the MOOC (the so-called “pre-survey”). Finally, some learners only answered the questionnaire at the end of the course (the so-called “post-survey”).

Beside these data linked to the questionnaires that are going to support our analyses, information linked to the registration and the certification are also available and displayed in Table III. It shows that we can hardly assert that the success of a MOOC and the quality of its learning process is reflected by the number of registered participants. By contrast, the completion of the course is a fundamental measure of its success (Xu and Jaggars, 2011, p. 361).

Table III: Active retention rate and passive retention rate for the Louv3x MOOC

<table>
<thead>
<tr>
<th></th>
<th>Louv3x 1&lt;sup&gt;st&lt;/sup&gt; edition</th>
<th>Louv3x 2&lt;sup&gt;nd&lt;/sup&gt; edition</th>
<th>Louv3x 3&lt;sup&gt;rd&lt;/sup&gt; edition</th>
<th>edX average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered learners</td>
<td>7667</td>
<td>5661</td>
<td>4490</td>
<td></td>
</tr>
<tr>
<td>Active learners (/number of registered people)</td>
<td>1578 (21%)</td>
<td>2211 (39%)</td>
<td>1222 (27%)</td>
<td>10%</td>
</tr>
<tr>
<td>Certificates (/number of registered learners)</td>
<td>1363 (18%)</td>
<td>939 (16.5%)</td>
<td>771 (17.2%)</td>
<td>5.80%</td>
</tr>
<tr>
<td>Certificates (number of active learners)</td>
<td>86%</td>
<td>42%</td>
<td>63%</td>
<td>57%</td>
</tr>
</tbody>
</table>

Source: IPM and authors, 2014 and 2015

Therefore, it is more interesting to measure a MOOC success by its number of active learners, as defined by edX, that is to say learners who completed at least one activity during the second week. This echoes the studies that show the most important attrition occurs between the first and the second week of learning, followed by a stabilization of involvement rate during the rest of the course (Cassidy et al., 2014, p. 8). The “active learner” criterion does not include those who did not get further than the first week's exercises. It is therefore imperative to create two different indicators. As a matter of fact, the learners’ retention can be calculated as follows: number of registered learners/number of certificates obtained, or number of active learners/number of certificates obtained. Notwithstanding the scientific debates around the notion of retention and its calculation (Cheung, 2014, p. 19-22), we apply the two following definitions. The first indicator corresponds to the overall success rate, which we call the passive retention rate. The second one corresponds to the success rate among the
active learners, which we call active retention rate. On the basis of this criteria, Louv3x has a passive retention of 17% on average (that is to say around three times higher than the edX average), and an active retention of 86% for the 1st edition, 42% for the second edition and 63% of 3rd edition.

Beside the technical and pedagogical choices presented below, the retention can be analyzed from the learners' profiles and motivations since those influence the drop-out rate (Bonk and Khoo, 2014, p. 25; Cassidy et al., 2014, p. 13). The learners' involvement is featured as their satisfaction, motivations and their attendance to the course (Toven-Lindsey et al., 2015, p. 2). It is therefore important to connect the retention rate with objective (learners' typical profile) and subjective (learners' motivations) factors, which explains the higher success rate of a MOOC like Louv3x.

2.1. The typical learner is a 30-year-old man who already graduated

The learners' distribution in terms of gender, age, geographical situation and the highest degree obtained is informative. However, it has to be noted that some authors, like Adamopoulos, did not find any link between retention and the learners' characteristics: “Finally, attrition was not found to be related with student characteristics (i.e. gender, formal education)” (2013, p. 16).

The figures below show that our learners are located in 160 different countries. The top 3 countries are Belgium, France and the United States. Most of the learners are men (60% on average), relatively young (born in the 80's-90's) with a higher education diploma (more than 65% obtained a bachelor's degree, a master's degree or a career oriented diploma). We find that the average age approximately corresponds to the edX average age, which is around 30 (edX, 2015).
Figure I: Distribution of individuals (%) by gender

Source: edX – 2014 and 2015, from a sample of 7568 (edition 1), 5661 (edition 2) and 4490 (edition 3) individuals

Figure II: Distribution of individuals (absolute numbers) by year of birth

Source: edX – 2014 and 2015, from a sample of 7568 (edition 1), 5661 (edition 2) and 4490 (edition 3) individuals
2.2. Motivations to learn

Beside the socio-demographic and objective variables, it is crucial to take the motivational and subjective factors’ weight into account: “[...] when we discuss retention issues in MOOCs, we must begin with a solid understanding of participants’ learning goals and the implication for corresponding views of what counts as being ‘finished’ (Zheng et al., 2015, p. 1892). The intention to obtain the certificate is combined with a series of reasons why the learners take the course until its conclusion, as showed by Figure V, relating to the MOOC Louv3x.
Figure V: Distribution of individuals (%) by reason to take the course

![Graph showing distribution of reasons for taking the course]

Source: Authors, 2014 and 2015 – Data expressed as a percentage, from a sample of 1428 individuals (pre-questionnaire) for the 1st edition; from a sample of 1583 individuals (pre-questionnaire) for the 2nd edition and from a sample of 946 individuals (pre-questionnaire) for the third edition; the total is not always equal to 100 because of rounded percentages.

Beside the motivations displayed in Figure V, a certain number of other additional reasons and motivations were given by the learners when they answered the question: “Could you tell in a few words why you registered for the MOOC and what your motivations are?” Reasons like language learning, the specific advantages of the MOOC (online, flexible, interactive), as well as the possibility to work autonomously and at one’s own pace were often mentioned. Furthermore, we find that between the beginning and the end of the course, the aim to register to the course remains largely the same, as showed by Table IV.

**Table IV: Distribution of learners’ opinions about the aims they had when they register for the course (pre-questionnaire)/they had when registration was open (post-questionnaire)**

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Pre</th>
<th>Post</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Just having a look.</td>
<td>1.04</td>
<td>4.41</td>
<td>0.82</td>
<td>1.48</td>
<td>1.55</td>
<td></td>
</tr>
<tr>
<td>I am only going to do what I am interested in, probably not the whole course.</td>
<td>4.73</td>
<td>3.40</td>
<td>2.84</td>
<td>0.98</td>
<td>2.43</td>
<td>1.03</td>
</tr>
<tr>
<td>I consider taking the whole course passively, without taking part to activities.</td>
<td>9.87</td>
<td>14.23</td>
<td>13.58</td>
<td>14.22</td>
<td>10.78</td>
<td>5.15</td>
</tr>
<tr>
<td>I consider taking part in every activity, but I do not feel under pressure.</td>
<td>39.19</td>
<td>33.87</td>
<td>50.98</td>
<td>46.08</td>
<td>39.75</td>
<td>44.33</td>
</tr>
</tbody>
</table>
I firmly intend to take part in every activity and to obtain the certificate. | 45.17 | 44.08 | 31.78 | 38.73 | 45.56 | 47.94

Source: Authors, 2014 and 2015 – Data expressed as a percentage, from a sample of 1439 individuals (pre-questionnaire) and 1293 individuals (post-questionnaire) for the 1st edition, from a sample of 1583 individuals (pre-questionnaire) and 204 individuals (post-questionnaire) for the 2nd edition and from a sample of 946 individuals (pre-questionnaire) and 194 individuals (post-questionnaire) for the 3rd edition; the total is not always equal to 100 because of rounded percentages.

Generally speaking, more 40% – and even more in the second edition – of the respondents’ claim that they firmly intend to accomplish every activity and obtain the certificate. This group is supplemented by 40% of other respondents who are willing to accomplish every activity, but without putting themselves under pressure. In total, we thus find that more than 80% of the respondents (in the pe-survey) wanted to complete the MOOC. At the end of the MOOC, around 80% of the respondents (of the post-survey) declared having “the firm intention to accomplish every activity without putting themselves under pressure or with the intention to obtain the certificate”.

2.3. Expectations regarding the learning achievements and their evolution

In order to refine the learners’ learning expectations, we asked them at the beginning of the course to which extent they expected to be able at the end of the MOOC to: (1) understand, define and explain political science concepts; (2) connect concepts with their authors and, more generally, the concrete phenomena they represent, and finally; (3) initiate objective analyses of political phenomena on the basis of their newly acquired knowledge. Learners could choose, on a Likert scale, between five modalities going from “Strongly disagree” to “Strongly agree”.

Table V: Distribution of individuals by learning expectations estimated before the beginning of the MOOC

<table>
<thead>
<tr>
<th>Understanding, defining and explaining concepts</th>
<th>Connecting concepts</th>
<th>Initiating Objective analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed.1</td>
<td>Ed.2</td>
<td>Ed.3</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1.84</td>
<td>0.19</td>
</tr>
<tr>
<td>Disagree</td>
<td>1.78</td>
<td>2.60</td>
</tr>
<tr>
<td>Neither agree nor disagree</td>
<td>2.39</td>
<td>2.47</td>
</tr>
<tr>
<td>Agree</td>
<td>23.98</td>
<td>37.82</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>70.01</td>
<td>59.62</td>
</tr>
<tr>
<td>N</td>
<td>1464</td>
<td>1618</td>
</tr>
</tbody>
</table>

Source: Authors, 2014 and 2015 – Data expressed as a percentage (pre-questionnaire); the total is not always equal to 100 because of rounded percentages.
Table V reveals that learning expectations are high: around 90% of the learners who answered the pre-questionnaire feel they will be able to understand, define and explain concepts at the end of the MOOC. The same trend can be observed for the two other learning objectives.

The same questions were asked at the end of the MOOC in the post-questionnaire, where the learners had to place their answer on a scale from 1 to 10, in order to provide more precise results. In this case, two questions were asked. The first one concerns their skills before the course: “What are your skills regarding this objective before the beginning of the course?” The three aims are “to understand, define and explain political science concepts”, “to connect concepts with their authors and, more generally, the concrete phenomena they represent”, and finally, “to initiate objective analyses of political phenomena on the basis of their newly acquired knowledge”. The second question focuses on their skills after the course: “Now that the course is over, what are your skills regarding this objective?” The three following graphs illustrate the distribution of learners’ positioning evolution before and after the course.

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1 Due to the change of answer categories in the edition 3 questionnaires, histograms are used in order to present the effects.
Figure VI: To define and explain political science concepts

Edition 1

Edition 2

Edition 3

Caption: AA1: objective before the MOOC; PAA1: objective after the MOOC
Source: Authors, 2014 and 2015, from a sample of 1207 individuals (post-questionnaire) in 2014 (1st edition), 294 individuals in 2014 (2nd edition) and 194 individuals in 2015 (3rd edition)
Figure VII: To connect the authors and, more generally, the concrete phenomena they represent

Edition 1

Caption: AA2: objective before the MOOC; PAA2: objective after the MOOC
Source: Authors, 2014 and 2015, from a sample of 1207 individuals (post-questionnaire) in 2014 (1st edition), 294 individuals in 2014 (2nd edition) and 194 individuals in 2015 (3rd edition)
Figure VIII: To connect the authors and, more generally, the concrete phenomena they represent

Caption: AA3: objective before the MOOC; PAA3: objective after the MOOC
The figures show a clear evolution of the skills acquisition feeling for the learners who answered the questionnaire after the MOOC. This feeling is more significant regarding the understanding and defining of political science concepts. Regarding the two other objectives, the respondents also express a feeling of skills acquisition but which is relatively less marked, since these skills need more time and practice.

If we combine the evolution expressed by the learners with the objectives stated by them, the acquisition feeling appears even more obvious. First of all, it should be noted that, in the beginning of the course, all the respondents are located in the same area, between 4 and 5 on the scale from 0 to 10, regardless of their learning objectives (lines 1 to 5 on the figure). People who took the course “just to have a look” (line 1), do not feel they have really evolved in their acquisition. On the contrary, the higher people set an objective (line 2 to line 5), the more they say they evolved in their acquisition. So, learners who firmly intended to “take part in every activity and to obtain the certificate” show the strongest evolution in the skills acquisition feeling, going from a score of 5 to approximately 8 on a scale from 0 to 10.
Figure IX: Evolution of the skills acquisition feeling depending on the objectives

Edition 1

Edition 2

Edition 3
3. Conclusion

As noted in the introduction, an agreement arises from literature on the fact that only a few of the learners of a MOOC follow it until the end (some studies show numbers going from 5 to 10%, while others claim that it would be under 13%). To identify the reason why the MOOC Louv3x enjoys a much higher rate, we distinguished between the active retention rate and the passive retention rate. Doing so, we wanted to go further than the simple criterion given by the number of registered learners, and to focus on the learners' profiles and motivations, as well as on the course construction.

The reward-based evaluation certainly encouraged the learners to participate more and to take the course until the end. The strong interactivity during the course first edition and the feeling to belong to a leaning community also correspond to the statements from the literature (Khalil and Ebner, 2014; Zheng et al., 2015). Our data confirm well established trends, like the fact that a prior preparation to the involvement in an online course can improve one’s success rate (Xu and Jaggars, 2011, p. 362). This article contributes to a better understanding of the relationship between involvement, retention (of which it proposed a new conceptualization in terms of active vs. passive retention, as well as its operationalization) and motivations of the learners and teaching team, which would be, according to Adamopoulos (2013), the most influencing factor for retention. The analysis of motivations and expectations about the learning outcomes indicates there exists a link between the objectives set by the
learners, their expectations and their representation of the skills they think they possess, and what they think they acquired.

These motivations and expectations also influence the retention. Indeed, the higher the aim set by the learner himself was before the course (namely the willingness to obtain the certificate), the greater the chances are that they take part in every activity and therefore obtain the certificate. But it is not merely a question of will, because this relationship has to be understood in the multidimensionality offered by a MOOC environment. The MOOC structure, as it makes different learning experiences possible (Arbaugh and Benbunan-Fich, 2006), offers a multiple learning environment, which can help the learners to meet the objectives in terms of content and method, while keeping their motivation strong. In this way, Louv3x, by proposing the following learning experiences: "objectivist-individualist", "objectivist-collective", "constructivist-individual" and, to a lesser extent, "constructivist-collective", could contribute to diverse dynamics aiming to acquire knowledge that reinforced the learners’ motivation, which helps to partly explain its higher passive and active retention rate than the MOOCs average.

References


