

Web Science for the masses.

The First Web Science MOOC.

(Presentation proposal)

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ABSTRACT

In November 2013, the first MOOC of Southampton University was launched. It was also the first MOOC in Web Science. Two editions have already been released, and have introduced Web Science to more than 20.000 learners. This presentation will show the content of this course, the context within which it was developed, its main learning objectives, and how it was assessed.

Categories and Subject Descriptors

H.3.5 [Information Storage and Retrieval]: Online Information Services

General Terms

Management, Documentation, Economics, Human Factors, Theory, Legal Aspects.

Keywords

MOOC; Web Science; Online Education; Course design

INTRODUCTION

In Mid November 2013, the first Web Science MOOC went live. Nearly 14.000 learners registered, and over 1200 completed it. It had a second run with nearly 5000 joiners and more than 350 completers. And a third iteration is scheduled for October 2014, for which more than 1200 people have already signed up. The impressions of the University are that the course has fulfilled its purpose, given the media coverage [1], [2], and the learners' comments. This presentation will describe how the course was developed and deployed, what kinds of learners it was designed for, what were its learning objectives, and how it was assessed.

1. COURSE CONTEXT

The course was conceived as a Massive Online Open Course, with all the implications carried by this acronym: high numbers of learners from all over the world who take the course for free and have a high diversity of backgrounds. Prior knowledge, experience and learning could not be assumed or accounted for in the selection or design of a pedagogic approach. We are starting to know more about our learners, but before the course started, the

materials were being developed and curated for an unknown audience. We only knew that the learning community was going to be numerous, but not even how much. However, we had somewhat clear which kind of audience we wanted to reach: learners with an interest in developing their understanding on how the web is shaping our contemporary society and viceversa, a portion of which could potentially become interested in enrolling in a more formal Web Science programme, at any university that offers such a curriculum, preferably ours. For this purpose, and in line with the narrative of "MOOCs as Rosetta Stones for new Disciplines" [3], the content was written at an introductory level with an aim of unveiling Web Science ontologies and epistemologies to the wide public. That is, it was intended to show in the most succinct and accessible way as possible what phenomena Web Science studies, and what approaches are used to study them.

It should be pointed out that the course the delivery was built on a MOOC platform called FutureLearn, an initiative by the British Open University. The pedagogical approach of the Web Science academic team had to be adapted to fit within that of the platform, which is in turn based upon Laurillard's Conversational framework [5]. This learning theory places an emphasis on the use of technologies in education in order to create shared spaces that enhance learner interaction. These spaces, in the Web Science MOOC, were the 120 different discussion forums where learners were encouraged to share their views and reflections. The structure of the course and its different elements were adapted to fit within the above-mentioned pedagogical framework, in which the learner would advance in the course step by step. These 'steps' consisted of activities such watching a short video, reading an article written in a format specific for the platform, engaging in a discussion, or completing an exercise. Each of these 'steps' contained a unique discussion forum, which allowed educators to direct learners' interactions according to their pedagogical intentions, and reduced the possibilities that learners were lost in off-topic conversational threads.

2. COURSE OBJECTIVES AND TARGETED COMPETENCIES

In terms of the course aims and objectives, its title is self-explanatory: developing a deeper understanding on "How the Web is Changing the World". It is intended to raise learners'

awareness on the necessity of an interdisciplinary approach [4] and a set of varied methods of enquiry in order to understand the processes by which different domains of society such as leisure, commerce, crime, and governance have evolved since the emergence of the web.

By completing the course, learners are expected to become familiar to the theoretical framework within which the web is studied at an academic level. It is also intended that they acquire methodological skills for identifying issues related to the web and society, and critically analyse the existing discourses in this respect. Learners are also expected to perform some activities that demand the application of different network theories, and being able to reflect on what is implied when attempting to regulate the use of the web.

3. COURSE CONTENT

The content of the course is divided in 6 modules, each of which has one week of duration.

Week 1: What is Web Science? As well as presenting the course team and the way it will be delivered, in this week, the core conceptual foundations of web science are introduced, placing emphasis on its interdisciplinary approach. Theories such as technological determinism and social construction of technology are presented in short videos and concise text-based articles, with the aim of presenting the learner what web scientists do.

Week 2: Networks. In this module, some aspects of network theory will be introduced, and learners will perform some simple mathematical analysis to the circulation of information through networks. Also the implications of the use of social media are discussed.

Week 3: Crime and security. The main concerns on cybercrime and cybersecurity are presented this week, in which it will be explained how criminal activity has adapted to the changes that the web has promoted, and what measures are taken to prevent it. It will also raise awareness on how deviant and criminal behaviour is regarded with different lens depending on whether it happens online or off-line.

Week 4: Democracy. How political activism is done through the web, how governments use the web in their activities, the concept of open data, and what is the role of social media in the democratic processes is presented in this module.

Week 5: Economy. This week gathers insights about digital economy. It draws on the new business models that have emerged with the advent of the web, what are the opportunities that it has created for both enterprises and individuals, and what are the threats that it poses. It also draws on the role of social media in the labour market, and venture creation in the digital age.

Week 6: What is next from the web? This week discusses the direction the web is taking, placing emphasis on the semantic web and the internet of things. This is also a closing module that invites learners to reflect upon what they have learned and whether and how their vision of the web has changed after the six weeks of the course.

4. EVALUATION METHODS

This course is not for credit, and no summative assessment was planned for it in the first run. The second run offered the opportunity to sit an exam for obtaining an official attainment certificate. This exam consisted of 35 multiple-choice questions about the materials presented in the course.

As formative assessment, there were also quiz questions by the end of each of the course modules. Open questions were also made at the end of both iteration, although in the first run feedback from the facilitators was given to the first 100 responses, and a peer-assessment system was deployed in the second run. The question was the same in both editions: ‘What would you do if you ruled the web?’ Learners were expected to write a short composition reflecting upon all the web related issues that they had learned about during the course.

5. PRESENTATION DELIVERY

The presentation will be delivered in 5 minutes. Nothing in this presentation proposal will be omitted, although given the time constraints some of the sections will be highly summarized. Visual aids will mainly contain screenshots of the course web site, and a few short phrases in bullet points when needed.

6. REFERENCES

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