Innovative forms of delivery in an online university: moocs

José Antonio Díaz (UNED-Spain)
jdiaza@poli.uned.es
CONTENTS

1) From “The Coming of the Post-Industrial Society” to “The Network society”
2) New socioeconomic paradigm: ICT
3) knowledge in society
4) Impacts and changes ahead
5) MOOC as an example
From “The Coming of the Post-Industrial Society” to “The Network society”

- Fritz Machlup (The Production and Distribution of Knowledge, 1962)
- Peter Drucker The age of discontinuity: Guide lines to our changing society, 1968). Society is being transformed into a "knowledge society"
- Alain Touraine (La société post-industrielle, 1969)
- Daniel Bell (The Coming of the Post-Industrial Society, 1973)
- Yonehi Masuda (The Information Society as a Post-Industrial Society, 1980)
- Alvin Töffler (The Third Wave, 1980)
- Bill Gates (The Road Ahead, 1995)
- Don Tapscott (Digital Economy, 1995)
- Nicholas Negroponte (Being Digital, 1995)
- Manuel Castells (La Era de la Información, 1999)
What is the Internet, from the sociological point of view?

- “Is the technological infrastructure and organizational systems that enables the development of a number of new forms of social relationship .. they are the result of a series of historical changes .. (that) can not be developed without Internet "

(Manuel Castells, Internet y la Sociedad red, http://tecnologiaedu.us.es/revistaslibros/castells.htm)
2. New socieconomic paradigm: ICT

• This is a revolution of social and cultural dimension, which is in its beginning. As the Industrial Revolution, there will be a before and after in the organization of society.

• The application of information and knowledge is a strategic factor of economic competitiveness and social welfare.

• Importance of innovation

• New economic sectors (education, research),

• new occupations (professional, technical, scientific),

• new institutions (universities, academic institutions, research corporations)

• It all depends increasingly of the global context

• We are in the pre-deployment stage.
The advances and ubiquity of communication and Internet technology provide new forms of connectivity for dispersed knowledge workers, transforming the nature and process of knowledge work.
D. C. Engelbart want a modern technology (Augmenting human intellect)...

“to give direct aid to an individual in comprehending complex situations, isolating the significant factors, and solving problems” [1]
Technologies are increasingly created by self-organizing knowledge workers. For example, Linux is developed by an essentially volunteer, self-organizing community of thousands of programmers who collaborate on diversified ideas through constant exchange of open source code.
The basic thesis is that knowledge is in the network, and the learning process is to manage efficiently the knowledge that is in the network. [1]

Figura 1.- Evolución de la Web (según Nova Spivack).
“The recent emergence of theories of learning that are based on networked contexts, such as “heutagogy” and “connectivism”, helps us to understand that learning is about making connections with ideas, facts, people, and communities. Obviously the Net excels at allowing users to both find and utilize these connections.” [1]

“At the heart of the movement toward open educational resources is the simple and powerful idea that the world’s knowledge is a public good and that technology in general and the Worldwide Web in particular provide an extraordinary opportunity for everyone to share, use, and reuse it.” [1]

[1], The Promise of Open Educational Resources, The William and Flora Hewlett Foundation, p. 2
Impacts and changes ahead

- New organisational models. Finally, the meta-paradigm incorporates the criteria for best organisational practice. As the new technologies transform work and consumption patterns, they also transform the way work and businesses are organised. Regular practice in the use of these technologies and in relating to the new conditions in the market contributes to the establishment of new principles of organisation that prove superior to the previous and become part of the new common sense for efficiency and effectiveness.

- From elearning to uLearning, (ubiquitous learning)
“Our premise is that the digital economy is no longer the purview of the information and communications technology (ICT) sector, but rather of web-based collaborations and networks, of which Massive Open Online Courses (MOOCs) are an example.” [1]

MOOC as an example

- Networks are the structures through which knowledge is created, shared, and improved during a MOOC, particularly by participants.
- In MOOCs, learners are in a sense both creators and consumers of knowledge.
George Siemens…

“The success of our first course - CCK08 - was not anticipated. We found quickly that the course took a life of its own as participants created Second Life meeting areas, Google groups to discuss certain topic areas, study groups for people in similar locations, Facebook groups, and so on.”

(en Alexander McAuley, Bonnie Stewart, George Siemens and Dave Cormier (2010), The MOOC model for digital practice. P. 21)
Key question…

In answer to the questions of the knowledge, skills and attitudes individuals need to thrive in this economy, and how they may be developed, the MOOC model serves as an ecosystem for exploring both.
What is a MOOC?

• MOOCs are “Massive Open Online Courses”. So far, MOOCs can be characterised as follows:
  1. They are online courses
  2. With no formal entry requirement
  3. No participation limit
  4. Are free of charge
  5. and do not earn credits.
Source: Phil Hill, 24/07/2012
Cited by: Michael Gaebel (2013), MOOCs. Massive Open Online Courses, EUA Occasional Papers
Two different models of MOOCs:

- cMOOC model (c for connectivity), which “emphasises creation, creativity, autonomy and social networking learning” and “focus on knowledge creation and generation”. The cMOOCs stand in the tradition of Connectivist philosophy, and refer to the work of Ivan Illich.

- xMOOC model – which is more or less the approach described so far – which “emphasises a more traditional learning approach through video presentations and short quizzes and testing” and “focus on knowledge duplication”. (Siemens, 2012)
educational institutions are currently offering different types of MOOCs.

- The xMOOC (Daniel, 2012) provide certifications of knowledge through structured courses with materials provided by teachers or at least discussion forums in which teachers answer questions. Often, tutoring for participants is available. These courses maintain the open character of knowledge, as well as the mass and online aspects, but they lose the initial character of cMOOC.
- cMOOCs allow a higher level of self-organisation on the part of the learning community.
- More recently, other institutions are organising MOOCs focused on specific tasks.
- Therefore, there are at least three different types of MOOCs, which are categorised according to emphasis on functionality and network connectivity (network-based), programming (Task based), or course content (Content Based) (Lane, 2012).
The point has been made that MOOCs are real courses:

- they are not video-taped, but are taught courses with a variety of lectures (which are taped), textbooks and exercises;
- they have a concrete starting and end point, but within these limits allow students to study at their own pace;
- they may involve interaction between teacher and student, and among students. Coursera courses even foresee peer assessment of exercises.

However, closer consideration of a few specific MOOCs shows that there is quite some diversity:

- Some courses prescribe a schedule, with a starting and end point, and fixed dates for delivering assignments, whereas others do not set any timeline, and come very close to other types of open source, online learning offerings.
A learning revolution – or a new business? (M. Gaebel-EUA)

• A New York Times article states, “in the past few months hundreds of thousands of motivated students around the world who lack access to elite universities have been embracing them (MOOCs) as a path toward sophisticated skills and high-paying jobs, without paying tuition or collecting a college degree.” (Tamar Lewin, 04/03/2012)

• But critics remark that MOOCs as such are not really revolutionary in that all their elements already existed beforehand. Even the combination of top research universities providing online courses to a larger number of students is not new.

• Many of the present MOOCs are rather traditional in their pedagogical and didactic approach, and often also of low quality.

• Daniel states: “A first myth is that university brand is a surrogate for teaching quality. It isn’t. The so-called elite universities that are rushing into xMOOCs gained their reputations in research.”
Are MOOCs paving the way for new means of knowledge dissemination?

• This appears to be the case to the extent that they are clearly used by a large number of people who find them beneficial. But the question is probably more about the degree to which they will supplement traditional education provision or even replace it.
What to learn from MOOCs – issues for discussion

• Are MOOCs a new model?
• Is this the end of universities?

This is what some people believe:

• Clayton Christensen, a Harvard Business School professor and author of “The Innovative University”, predicts “wholesale bankruptcies” over the next decade among standard universities.
• Sebastian Thrun, a German computer science professor who left Stanford and founded Udacity predicts that in 50 years there will be only ten universities left in the world.
My questions and working hypotheses:

1. How knowledge is analyzed on the network? Through moocs
2. The network will change the role of universities, teachers, students.
3. Knowledge exists (software), there is infrastructure (hardware). We need reorganizing society (orgware)
4. New social relations related to knowledge will be developed:
   a. person to person,
   b. University to person (institutions)
   c. person-to-machine (repositories, artificial intelligence). We can think faster!
   d. University to University (convergence traditional university and distance Uni.)
   e. Machine to Machine

1. Change is already taking: the key is self-organization and collaborative work
2. There are already new social networks (informal) that will transform the creation and dissemination of knowledge. We must analize these network
Thank you very much....