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Instructional design and creation of Digi-Fem MOOC

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Abstract

The current paper describes the process of the instructional design and creation of the Digi-Fem MOOC, a European Erasmus+ funded project. The aim was to produce and develop online e-learning materials suitable for the needs of the target group, as well as to develop innovative online learning content, e.g. video courses, animation, scenarios, etc, in order to help young women to develop entrepreneurial skills. After a short introduction regarding the types and the philosophy of MOOCs, we present the aims, the design and the creation of the Digi-Fem MOOC.

Keywords: Digi-Fem MOOC, instructional design, edX platform

1. Introduction

1.1 What is a MOOC?

The development of MOOCs has its roots in the Open Education Movement, which advocates that knowledge must be freely shared, and that people's desire and need for learning must be met without demographic, economic and geographical limitations (Peters, 2008). The MOOCs are open, free courses (although there might be a fee for certification of attendance, but not for educational material nor for the use of the training platform), which are open to the general public and are offered by educational institutions.

The acronym of MOOCs (O'Prey, 2013; Hollands & Tirthali, 2014):

- **Massive:** they are designed to allow thousands of participants/learners to enroll. The number of participants in such courses can reach hundreds of thousands.
- **Open:** theoretically, everyone with an internet connection can enroll in the free course. Most of the MOOCs are offered free of charge by large organizations and usually they do not imply any specific criteria for the registration. They use open-access learning resources and are offered by open source software free software.
- **Online:** a significant part of the interaction takes place online through discussion groups, wikis, or by watching short videos. MOOCs are usually offered via the Internet, but they can also be offered to closed groups of students through the network of their institution.
- **Courses:** there are specific start and end dates, student evaluation forms, quizzes and final exams.

1.2 Types of MOOCs

MOOCs are generally separated into cMOOCs and xMOOCs.

The cMOOCs (connectivist MOOCs) are based on web interaction, on the social dimension of learning through participants' communication, on the learner autonomy, and generally they follow a connectivist approach of learning. In cMOOCs the development of informal learning networks is fostered and the emphasis is on collaborative learning. The courses are built around a group of people of the same philosophy and are relatively free of the usual institutional limitations.

The xMOOCs (eXtended courses) rely on teacher's intervention to build and present the content, which is less learner-centered than the previous ones. They are more reliant on the structure of the lesson as they do in a traditional classroom, they use videos, trials, exercises and various evaluation methods. They follow a more behavioral approach. At xMOOCs, leading universities such as Stanford, Harvard, and others create the lessons and the learner's obligations focus on 'consuming' the content of the courses and completing evaluations to assess understanding of the content (Ahn et al., 2013).

1.3 The edX platform

EdX (https://www.edX.org/) is a non-profit MOOC platform created by MIT and Harvard, which funded it with \$ 60 million. In 2013, 92 courses were offered through the platform.

In the case of the courses offered by edX (https://www.edx.org/) working with universities such as MIT, Berkley University of California and Harvard, the learning material is given mainly in the form of weekly videos, notes, links and e-books.

Evaluation is done by a weekly test, exercises, assignments, peer grading and a final test or paper.

Learner's support and guidance comes from either peer learning and/or teaching assistants via email, discussion boards and forums. Social media (facebook, twitter ..) also play an important role in student interaction and problem solving. There is always the ability to communicate with the teacher but this is rarely done as the need does not usually arise.

1.4 How do I participate in a MOOC?

Anyone who decides to participate in a MOOC is linked to the appropriate site by simply indicating his intention to participate. His/Her obligations are to attend the courses, to respond to tests, quizzes, tasks etc, to participate in the forum and to take the final quiz.

2. DIGI-FEM MOOC

2.1 Aim & Expected Results

According to the <u>http://digifem.eu/</u>, the aim of the Digi-Fem MOOC is:

The Digi-Fem Massive Open On-line Course (MOOC) will offer specially designed Open Educational Resources (OER) and learning pathways on the main thematic areas of startup basics (business planning, supporting technology infrastructure, digital marketing and social networking), built around a business scenario development approach. Each thematic area will integrate learning content, best-practice scenarios and on-line, step-by step planning through the integrated use of the Digi-Fem toolkit. The Digi-Fem MOOC, available 24-7-365, aspires to offer young female entrepreneurs with valuable, readily applicable competences and skills, within a highly motivating and flexible environment. The main aim of the Digi-Fem MOOC is to be addressed to end users with EQF 5. Moreover, it will be directly linked to the mentoring and networking services, thus facilitating the establishment of business partnerships around Europe.

The expected results are:

After having completed the Digi-Fem MOOC, you will have acquired the necessary constituents of startup basics, such as classic good business planning sense (including financial and risk planning) blended with new technology enhancements (web advertising, e-commerce infrastructure, exploitation of social media and networking). Moreover, you will have acquired the desired skills and competences within a highly motivating environment, since you will be working on the creation of their own business scenarios.

2.2 Instructional design and creation of DIGI-FEM MOOC

The preparation phase for the Digi-Fem MOOC consists of the following steps:

- 1. Identification of the target group based on the proposal.
- 2. Literature review regarding the design of a MOOC.
- 3. Analysis and design of the Digi-Fem MOOC: TEI of Athens designed the MOOC Canvas that was used in Digi-Fem MOOC.
- 4. Review and redesign of the Digi-Fem MOOC based on the feedback from the stakeholders through qualitative research methodology.
- 5. Creation and production of the Digi-Fem MOOC. TEI of Athens, OUNL and BFI created four different MOOC Canvases for each one of the 4 thematic areas (Business Planning, Supporting Technology Infrastructure, Digital Marketing, & Social Networking) of the MOOC. The partners designed ways to achieve the Digi-Fem MOOC learning outcomes (knowledge, skills, competence) using a scenario-based approach.

2.3 Presentation of the Digi-Fem MOOC

The participants can register for the Digi-Fem MOOC via the Digi-Fem official site: <u>http://digifem.eu/</u>



Figure 1. The Digi-Fem official site

SECTION B: applications, experiences, good practices, descriptions and outlines, educational activities, issues for dialog and discussion

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📕 DigiFem 🗙 😋 DigiFem Platform 🗙 🛄		
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	v	Sign in
Well	come to DigiFem! I skills and tools for young female entrepreneurs.	
digitem		
DIGREM DEGITAL SKILLS AND TOOLS FOR YOUNG FEMALE ENTREPENEURS(DIGI- FEM), Sweij, eD, 2017	Disisten Drot DiGirEm Site BUILDER Santz Jan 01, 2016	

Figure 2. Sign in for Digi-Fem MOOC

2.3.1 The modules

There are four modules/units:

- Unit 1 -- Business Plan
- Unit 2 -- Supporting Technology Infrastructure
- Unit 3 -- Digital Marketing
- Unit 4 -- Social Networking

2.3.2 The content

We used videos that we have produced, videos from the YouTube, animation, OERs and e-books with open license.



Figure 3. Example of a video



Figure 4. Example of a video



Figure 6. Example of a video

Course Home Wilki Progr	ess Discussion Resources			
The Darkson Hardel Course				
	< D D	D	D	>
Supporting Technology infrastructure				
- Digital Marketing	How to market your great product?			
Introduction to Digital Marketing	As you have a great product* to sell, the first ch	allenge is to market your produ	icti.	
Online Marketing strategy for Digifem entrepreneurs?	In this section we will first look at the product, e	specially how to demarcate you	ur product from its comp	etitors.
Online marketing tactics	Emphasizing its USP its "unique selling points", choose your product is called the "4P's " of your	Which product qualities then a marketing mix. Notice that for	re essential for your buye this both old school mar	ers to keting
Social media marketing	methods and new marketing approaches are w	orth considering.		
Monitoring emergent trends Additional tools resources			1	
		An and a standard de la constantia de la	S a grant liter	
	USP What is so special about your prot	luct?		
	Investigating what made television campaigns fi that a "unique proposition convinced customer offer differentiates from the others.	om the 1940's onwards sucess s to sell. Is was a matter to stan	ful Rosser Reeves discover Id out by showing how yo	ered Sur
	Dilbert" Constr. House the set the set	NE UP OF TRO UTAL LI TABLE LI TABLE LI TABLE LI TABLE HARL LI TABLE HARL H	ALL THE INCLAS CONSIDERAN AND AND AND AND AND AND AND AND AND AND	

Figure 7. Example of a video

2.3.3 Student evaluation

The platform supports quizzes, multiple choice quizzes, true/false, assignments etc. We have chosen the multiple choice quizzes, written assignments and true/false questions.

Course Home Wiki Progres	s Discussion Re	esources		
- The Business Model Canvas				
The Business Model Canvas, Value Proposition and Customer Relationship	<	B		
Channels, Customer Relationship and Revenue Streams Key Activities and Key Resources	QUESTION 1 (What is a Business	(1 point possible) s Model?		
Key Partners and Cost Structure	A Business N	Model is an organisation's plan to cre	ate, deliver and capture value.	
Supporting Technology Infrastructure	A Business N	Model is a representation of how an o	organisation makes or intends to make mo	ney.
Digital Marketing	A Business N	Model is part of the Business Plan.		
	A Business M	Model is part of the Business Model (Canvas.	
	? CHECK			

Figure 8. Example of a quiz

digilem DIGIFEM: DF01 DIGITAI	SKILLS AND TOOLS FOR YOUNG FEMALE ENTREPRENEURS(DIGI-FEM).
Course Home Wiki Prog	ress Discussion Resources
+ The Business Model Canvas	
Supporting Technology Infrastructure	
Internet Technology	1) QUESTION (1 point possible)
Web Technology	A router Connects Networks.
Internet-access software applications	0 True
Managing hardware and systems software infrastructure	0 Elec
Section's Quiz	o Poise
Digital Marketing	OHEOK
	2) QUESTION (1 point possible)
	A switch
	A switch serves as a controller, enabling networked devices to talk to each other efficiently.
	0 True
	0 False

Figure 9. Example of the final quiz

2.3.4 Discussion forum

There is also a discussion forum where learners/participants can exchange ideas, promote collaborative learning and discuss topics.

ress Dis	cussion	Resources	🖉 New Po
3 Q			
cent activity 🔻		DISCUSSION HOME:	
	-	DIGITAL SKILLS AN	ND TOOLS FOR YOUNG FEMALE ENTREPRENEURS(DIGI-FEM).
		HOW TO USE DIGIFEM PLATE	ORM DISCUSSIONS
		Find discussions	Focus in on specific Q Search for specific topics Q Sort by date, vote, or comments
		Engage with posts	
		Receive updates	Check this box to receive an email digest once a day notifying you about new, unread activity from posts you are following.

Figure 10. The discussion forum

2.3.5 Resources

At the end of each module there are open educational resources available for the learners.

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Figure 11. OERs

	۲	D	D	D	D	>	
	Tradition	al and online marke	ting				
keting Ior	 DeMers, J (2016, 22 March) Is Traditional advertising Dead? @ Forbes. Retrieved at 1August 2017 from https://www.forbes.com/sites/jaysondemers/2016/03/22/is-traditional- advertising-dead/#6e8fcf7d2925 						
	 Levinson, Jay Conrad (2006). Guerrilla marketing: put your advertising on steroids. Morgan James publishing. 						
is	Principles of digital marketing						
	Godin, Seth (2003). Purple Cow: Transform Your Business by Being Remarkable. Portfolio						
	Social media marketing						
	 Kauffman FastTrac (2015) " Success Strotegies for Women Entrepreneurs: Social Media" Social media marketin tips by Sarah Mote a video march 2015 available at : https://youtu.be/CXGoOSUFSwE 						

Figure 12. OERs

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