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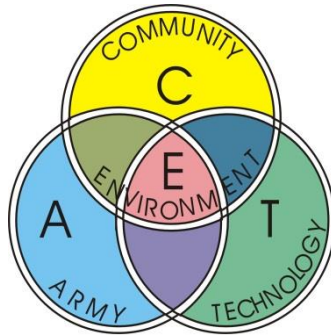Editor: Miroslav Hrubý

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Conference objectives:
Experience and information exchange in the field of:
- the current status and prospects of distance learning and e-Learning in the preparation of military professionals and other target groups;
- using the computer modelling and simulation, especially (but not only) in the command and control process;
- language education of military professionals and other target groups, current and future communication systems, their development and usage.

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CONTENT:

DESIGNING MODULE "PRESENCE AND ONLINE TUTORING" FOR THE MASSIVE OPEN ONLINE COURSE "ICT TOOLS FOR E-LEARNING"

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Abstract: *The authors disclose their experience of designing one module of the course, considering main steps in the process, specifics of the teamwork, the module's structure and content, forms of the teaching material representation, ICT tools applied. The study is accompanied with a list of problems which were encountered during the process of the module design, and solutions found in the process of work. Due to the fact that MOOC remains to be a pedagogical novice and there is a scarcity of instructions on designing the MOOC course, the study is believed to contribute to the development of the MOOC methodology and instructional design in online learning by sharing actual experience and discussing applied problems. The methods of the research include literature analysis, reviewing the findings of the recent projects and case studies in the area of MOOC, analysis of the authors' own experience.*

Key words: MOOC, instructional design, course, module design, online pedagogy, ADDIE Model, e-learning.

INTRODUCTION

Nowadays the notion of online learning is already very well known to all stakeholders of education while forms and modes of its delivery continue to develop due to the rapid enhancements in the ICT area and an urge to adjust educational services to the needs of learners.

We are witnessing an undergoing a global change in the education system which is caused by the necessity to provide multisided development to the learners in order to prepare them to live in an open information space, to shape the skills required for the 21st century, ensuring their continuous lifelong learning in both formal and informal formats. In this respect it is essential to establish flexible interaction between different social, economic and technological developments in the field of education in a global context with a special focus on designing new tools and means of open education.

One of the latest trends in the online learning is the establishment and escalation of MOOC (Massive Open Online Courses). After its emerge in Canada in 2008, MOOC has spread round the globe, involving more and more institutions in designing MOOCs and reaching broader masses of learners with different educational and cultural backgrounds.

Presently various institutions report on different interests of being actively involved in designing MOOCs. Thus, Duke University shows that students choose MOOC for several reasons [10]:

- To support lifelong learning or gain an understanding of the subject matter, with no particular expectations for completion or achievement;
- For fun, entertainment, social experience and intellectual stimulation;
- Convenience, often in conjunction with barriers to traditional education options;
- To experience or explore online education.

The institutions' purposes range from the intention to promote the brand of the school at the market of the educational services to the desire of researching and experimenting within new online pedagogy.

The endeavor to develop the module "Presence and Online Tutoring " within the MOOC "ICT Tools for E-learning" were missioned by the IRNet project – "International Research Network for study and development of new tools and methods for advanced pedagogical science in the field of ICT instruments, e-learning and intercultural competences" (http://el.us.edu.pl/irnet/).

This study focusses on the problems and experiences of designing a module of the MOOC in order to bring to the discussion the problem of developing appropriate teaching materials, concerns about the MOOC content, teaching methods and procedures together with the issues of establishing teamwork and its coordination in conditions of ICT-mediated learning.

Due to the fact that more and more instructors and institutions are facing the need to join the mainstream of providing online learning to broader circles of learners above those who are officially enrolled in the institution, the experience described in the paper may be helpful for those who are in the beginning of this path. Together with that, it is believed to contribute to the overall discussion of the problems concerning MOOCs pedagogy and development of new forms and methods of online learning.

In the context of the research the paper provides a brief overview on the issues concerning the definition of MOOCs and its distinctive features, how MOOCs differ from other forms of online learning, possible scenarios of MOOCs provision and the author's insights on the development of the module "Presence and Online Tutoring".

The methods applied to reach the aims of the study include literature analysis, reviewing findings of the recent projects and case studies in the area of MOOC, analysis of the author's own experience.

1. DEFINING MOOCS

1.1 Defining MOOC: Distinctive Features and Models

MOOCs are courses designed for large numbers of participants, and can be accessed by anyone and anywhere as long as they have an internet connection, MOOCs are open to everyone without entry qualifications, and offer a full/complete course experience online for free [2].

As William Gibson says "*The future is already here, it's just not very evenly distributed*", and that is true of MOOCs. Recently MOOC has been in the centre of all education stakeholders but it must be stressed 'all MOOCs are not created equal' and there are lots of species of

MOOC. This is good and we must learn from these experiments to move forward and not get bogged down in old traditionalist and modernist arguments. MOOCs will inform and shape what we do within and without institutions. What is important is to focus on the real needs of real learners [1].

The key characteristics of MOOCs are defined to include: varied definitions of openness, barriers to persistence, and a distinct structure that takes a form of one of two pedagogical approaches - the pedagogical structure of the connectivist MOOC model (cMOOC), or the conventional directed instruction in the context of the formal postsecondary educational institutions categorized as cognitive-behaviorist model [9].

Openness is known as one of the core components of a cMOOC, along with self-organization, connectedness, and complexity. Openness of information flow is a vital characteristic of a self-organizing complex system. cMOOCs are situated within open and distance learning initiatives, which are characterized by: (a) open technology and open software for educational purposes; (b) open content and open educational resources; and (c) open knowledge in which participants and facilitators openly share educational practices.

Barriers to Persistence in MOOCs are stressed to cause high drop out rates. Among the factors leading to the dropout are:

1. technology skills may become impediments to learning given the wide variety of tools used in the course;
2. for non-native English speakers, language skills could be a barrier when web conferencing sessions are facilitated in English;
3. for novice learners, the chaotic nature of the cMOOC may turn problematic since there is a lack of a coherent, centralized structure and the students' learning is not summarized or synthesized;
4. time zone differences, difficulty of meeting up with others online, challenges of making social connections;
5. time constraints as a major barrier for adult lifelong learners in established professions.

The factors and conditions for elaborating the new MOOCs in higher institutions entail [4]:

- Motivation from side of students, which study and will work in conditions of digital space, global world economy;
- Dynamic development of new competences, new professions, new skill which require permanent improvement of qualifications;
- Self-study, lifelong learning, sometimes with no requirements for monitoring results;
- New ICT-technology and creative tools for elaborating MOOCs;
- Solutions and regulations on the formal and legal aspects, which would provide a possibility for gaining qualifications, and successful completion of MOOCs be regarded as formal educational achievement (ECTS credits) for students within both informal and formal education.

Considering models of MOOCs it should be noted that MOOCs began with a connectivist model targeting an adult lifelong learning audience. The pedagogical structure of the connectivist MOOC model (cMOOC) incorporates a social, distributed, networked approach

and significant learner autonomy that is geared towards adult lifelong learners interested in personal or professional development.

Later the MOOC concept was applied to postsecondary online education using the xMOOC model, which was designed as a traditional teacher-directed course, yet automated, massive, and online.

These two distinct MOOC models attract different audiences, use different learning approaches, and employ different teaching methods.

2. DESIGNING MODULE "PRESENCE AND ONLINE TUTORING" FOR THE MASSIVE OPEN ONLINE COURSE "ICT TOOLS FOR E-LEARNING"

2.1 Scenario of Designing MOOC "ICT Tools for E-Learning"

By the features and the outline of the course, the MOOC "ICT Tools for E-Learning" can be categorized as the one developed according to the xMOOC model which presupposes rather a linear course structure and more formalized evaluation of the learning outcomes.

In the context of the IRNet Project the designing the MOOC course was conducted to fit the following scheme:
- Course name;
- Defining course type (problem solving);
- Course target audience (defining learning communities);
- Short course summary (2-3 sentences);
- Developing course syllabus;
- Outlining the knowledge and skills out coming from the course completion;
- Students' qualifications as prerequisite and those which are aimed to be attained;
- Students' weekly schedule (hrs.);
- Course duration;
- Timing of the course;
- Teachers', guest lecturers' and experts' biographical notes (full credentials and photo if a lecturer has more than 30-40 min of video; short note and no photo otherwise);
- Grading chart.

2.2 Steps in the Process

In the process of designing the module a number of preliminary stages has been passed. In their overall logic they reflect the stages and principles of ADDIE model which entails generating the instructional design via analysis, design, development, implementation and evaluation [3].

In the process of our module development the steps include [3]:

1. Researching on the methodology of online tutoring [17].
2. Analyzing the experience of providing online tutoring in the context of the formal education at the higher institution in Turkey, collecting data on the teaching strategies from online tutors and analysis of the findings [15, 16].

3. Studying the methodology of MOOCs, research on the latest trends and tendencies in provision of MOOCs for different learning purposes [7].
4. Defining the mission of the module "Presence and Online Tutoring" within the MOOC "ICT Tools for E-Learning", outlining the scope of the aims and appropriate content.
5. Sharing responsibilities in the team for developing teaching materials within the subtopics.
6. Development and design of the content.
7. Adjusting the content to the conditions of the online teaching with the application of the appropriate ICT tools.

2.3 Teamwork in Designing the Module

For designing the module, its structure and content, together with its technological realization, the teamwork is of special importance. Following the overall project guidelines and requirements the interdisciplinary team was established to work mutually at designing the module and developing its content.

For the proper development of the content and its implementation via ICT tools the following competences of the developers in the team are of prime importance:

- scientific vision of the undergoing work;
- skills of coordination, delegation of the responsibilities, monitoring the work in progress, reviewing the teaching materials on their compliance with the teaching mission and aims;
- the expertise in the subject matter based on the knowledge of the recent trends in the area and practical experience;
- awareness of the range of ICT tools which: 1) can be applied for adjusting teaching materials to the conditions of online teaching, 2) would facilitate the process of the module design, 3) would channel interaction with learners;
- expertise in dealing with technical issues, i.e. establishing the platform for the MOOC, managing the platform, uploading the materials, etc.

2.4 Structure and Content of the Module

The overall architecture of the module reflects the scheme established as the common for all modules within the course.

It includes:
- Pre-test (diagnostic test);
- Core didactic materials;
- Package of tasks;
- Creative tasks block (Students Projects);
- Additional reference material;
- Knowledge control (Evaluation and assessment).

The content of the module was designed to reach the following aims:
- To define the methodology of online tutoring;
- To analyze different models and practices of online tutoring;

- To outline clusters of ICT tools applied for the purposes of online tutoring;
- To outline competences required for online tutors;
- To define the role and functions of social media in the context of online tutoring;
- To analyze practices of implementing social media in the context of online tutoring;
- To define learning activities aimed to provide interactivity in online tutoring;
- To describe specifics of assessment and evaluation in conductions of online tutoring.

To reflect the aims, the module consists of the following topics:
1. What is online tutoring?
2. Methodology of online tutoring.
3. Scenarios of conducting online tutoring.
4. ICT tools in online tutoring.
5. Social media in online tutoring.
6. Competences required for being an effective online tutor.
7. Interactivity in online tutoring.
8. Conducting assessment and evaluation in online tutoring.

2.5 Forms of Teaching Material Representation

The teaching materials were organized following the guidelines of the project coordination:
1) The lectures were video recorded in duration 5-7 minutes for each, total amount of the lecturing time per week is 45-60 minutes;
2) Video lectures are followed by the multi-choice questions for the learners to control their comprehension of the topic;
3) The block of lectures in the module is finalized with the summing-up assignments which are to be graded.

The overall scheme of the module representation is the following (Module "Presence and Online Tutoring" - one week):
- Video 2.1. What is online tutoring? + No grade multiple-choice test.
- Video 2.2. Methodology of online tutoring + No grade multiple-choice test.
- Video 2.3. Scenarios of conducting online tutoring + No grade multiple-choice test.
- Video 2.4. ICT tools in online tutoring + No grade multiple-choice test.
- Video 2.5. Social media in online tutoring + No grade multiple-choice test.
- Video 2.6. Competences required for being an effective online tutor + No grade multiple-choice test.
- Video 2.7. Interactivity in online tutoring + No grade multiple-choice test.
- Video 2.8. Conducting assessment and evaluation in online tutoring + No grade different task.
- Graded test.

2.6 ICT Tools Applied for designing the module

For the development of MOOC and namely the module under the discussion, the following ICT tools were applied:

- LMS platform - the virtual location of the course, allowing to upload and to manage the content of the modules with the provision of forum for the overall discussion;
- PowerPoint - for developing presentations on the topics;

- YouTube - as a source of open educational resources concerning online tutoring;
- Audio / Video recorders, video formatting ICT tools - for designing video lectures.

2.7 Problems Encountered

When facing the necessity to elaborate the module within the MOOC and during the process of its design many questions and problems were arisen and needed to be solved and answered.

In Table 1 the problems encountered are collected together and accompanied with the solutions which were taken to proceed with the work.

Stages in designing the module	Problems and Questions	Answers and Solutions
Establishment and initiating the work	1. Where to start from?	1. Analysis of the recent experiences in MOOCs, latest case studies and project findings brings the idea on the mission of the teaching within the module and MOOC as the whole.
Content of the module	1. What should be within the content of the module? 2. How deep and extended should the material be exposed, considering that the module should reach broad circles of learners who may have no or little idea of the subject matter? 3. What language (i.e. terms, professional jargon, complicated/simplified sentences etc.) should be used to deliver the content?	1 - 2 - 3. Due to the fact that the MOOC audience may not have specific knowledge on the course content, the layout of the lectures should be concise and subject focused. The language of the narration should be simplified in terms of the sentence structure and lexicon.

Stages in designing the module	Problems and Questions	Answers and Solutions
Structuring the module and its timing	1. Should the modules within the course be structured in the same way or according to the vision of the module designers? 2. How to structure the teaching materials with the reference to the time of learning (i.e. timing per week, the start and the end of the course as a whole)? 3. How long should be the online session? 4. What is the proper way and form of presenting the topic?	1. It was decided to establish the same framework for each module within the MOOC though the content designers are free in designing the lecture content and format they would like to choose for their lectures and assignments. 2. (2-3) Usually the material input per session does not last more than 10 minutes. Yet the format of representing the material together with the speed of the narration should vary to keep the viewers' attention. 3. (4) The mixture of the input with the follow-up discussions, tests and creative assignments was assumed to be a format of this MOOC. Although the framework may vary depending on the aims of the course and targeted audience.
Teaching methods	1. What is the purpose of the pre-test in the module? 2. What kind of tasks should be suggested as follow-ups to the topics within the module? 3. Should the topic be disclosed in a formal (lecturing) way or more informal i.e. via conversations, storytelling, bringing different voices and opinions, etc.?	1. The pre-test is purposed to: 1) obtain idea on the learners' background knowledge on the topic of the course, 2) to set the learners focus on the issues discussed in the course, 3) to use their responses to observe developments in the learners' ideas on the content. 2. In the framework of this module the assignments are of two types: 1) multiple-choice questions to check the comprehension of the topic, 2) creative or problem solving assignments aimed to bring learners to the implementation of the theoretical input into the practice i.e. to find solutions for the real situations using theories learnt within the course. 3. The video lecture in the module should be aimed to comply with the following rules: simplicity, topic-based, catching attention, emotionally appealing, involving story-telling, applying analogies, metaphors and case-studies where it is possible.

Stages in designing the module	Problems and Questions	Answers and Solutions
ICT tools for designing the teaching materials	1. What channels to use to establish synchronous and asynchronous communication with the learners and among them? 2. Which ICT tools to apply to design the content?	1. For this course LMS platform with options of forum is established for the learning and communication purposes. Synchronous and asynchronous communication can be realized via mailing and social media channel, i.e. Facebook, Twitter, etc. affordable for the learners. 2. As video and presentation formats remain to be the predominant ones, the ICT tools can be selected respectively. In the practice of this study PowerPoint, and Camtasia (for video formatting) were applied the most. Although other available ICT instruments with similar functions can be applied too.
Establishing and coordinating teamwork	1. How to establish teamwork and coordinate the project to achieve the aims?	1. It should be noted that designing MOOC requires interdisciplinary competences which include expertise in the content of the course, competences in instructional design and evaluation, knowledge and skills of ICT tools. Competences to find a solution how to convert traditional teaching, which under real conditions may range from lecturing to discussion and storytelling, to the virtual mode, are of great importance. They entail broad knowledge of emerging technologies, which can be used all together or substituting each other to facilitate the process of the course design and the online learning afterwards. 2. Coordination of the teamwork requires all members' understanding of their mission, clear-cut formulation of the aims, transparent delegation of the responsibilities and a rigid scheme of the deadlines for the work to be done.

Table 1. List of Questions, problems and solutions according the elaboration MOOC
Source: own

CONCLUSION

Based on the research conducted and the experience of designing the module for the MOOC course the following can be concluded:

1. Despite the existence of certain practices and research, MOOC as a pedagogical endeavor remains to be a novice for the majority of the educators and learners. Although, more and more institutions are joining the mainstream in their attempts to establish online learning and open MOOCs with an ambition: 1) to follow the modern trends in pedagogy, 2) make the institutions visible at the market of the learning services and 3) to reach broader communities of learners. Under these circumstances educators are facing a need to convert their teaching styles and methods to the mode of the virtual learning and, therefore, searching for appropriate solutions via applying ICT instruments.

2. Designing MOOCs requires a cohesive team work of experts possessing interdisciplinary competences including expertise in the content of the course, competences in instructional design and evaluation, knowledge and skills of ICT tools. Competences to find a solution how to convert traditional teaching, which under real conditions may range from lecturing to discussion and storytelling, to the virtual mode, are of great importance. They entail broad knowledge of emerging technologies, which can be used all together or substituting each other to facilitate the process of the course design and the online learning afterwards.

3. Considering high interest to the MOOC as a pedagogical phenomenon and attempts of instructors to join the mainstream in online education, this paper is believed to contribute to the development of the methodology of MOOCs and instructional design in online pedagogy. As the study presented in the paper is in its on-going process, the designers involved in the project continue to search for the proper solutions which will be observable after the implementation phase of the module and the course as a whole.

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