

TEACHING DIGITAL NATIVES: MASSIVE OPEN ONLINE COURSES (MOOCS)

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Abstract: 2012 was declared "The Year of the MOOC" by the New York Times. Since then, both prominent universities and those wanting to raise their educational profile designed MOOCs for a variety of subjects and topics. My paper aims to provide an analysis of both the strengths and weakness of MOOCs with regard to teaching medical terminology and to argue that these open online courses can be an invaluable teaching aid for future generations.

Keywords: education, MOOCs, learning technologies, digital natives

1.Introduction: a revolution in learning

In 2012, only four years after Steven Downes and George Siemens launched the first MOOC (Massive Open Online Course)¹, Connectivism and Connective Science (2008) at the University of Manitoba, Canada, an article in the New York Times enthusiastically celebrated 2012 as the year of the MOOC. 2012 was indeed the year the MOOC conquered the higher education world, changing from "collaborative techie learning events" (<https://www.nytimes.com>) into massive enterprises of elite universities. Finding out that one advantage of the MOOC was to broaden the number of students who could be enrolled in a university-level course, many platforms such as Coursera, edX, and Udacity started collaborating with elite universities in order to provide open courses. What was the explanation for this sudden success? For one, the idea of the MOOC was probably as revolutionary as the establishment of the first schools free of charge had been in the 19th century. First of all, they responded to the general need for education, enrolling millions of students free of charge. Secondly, they responded to a specific need of our age, networking, in particular digital networking, engaging the attention and the abilities of the "digital natives" in ways traditional lectures and course design could never hope to achieve. The more revolutionary MOOCs, the cMOOCs (c stands for "connectivist") are based on connectivism and the concept of rhizomatic learning derived from the work of poststructuralist philosophers Gilles Deleuze and Felix Guattari, encouraging the autonomy of the learner, together with diversity, interactivity and openness. Although most cMOOCs use 'experts' as providers of knowledge, their educational model is not the transmission of knowledge on a hierarchical chain from teacher to student, but the sharing of knowledge between participants, by promoting interaction through blogs, learning communities and social media platforms. The more traditional – and the most common MOOCs are the xMOOCs (where x stands for eXtended), which are designed as additions to university courses. Their educational philosophy is based mainly on the traditional role of the teacher, providing video lectures which are available for downloading, computer-marked assignments as well as peer assessment, supporting materials, discussion forums and certificates of completing the course.

¹ Although relatively recent, the MOOC has already a contested history. The term MOOC was coined by Dave Cormier at the University of Prince Edward Island (<http://davecormier.com/edblog>) in a blog conversation with Downes and Siemens, in the context of the connectivism and rhizomatic learning. However, the launching of the first MOOC has been also claimed by HASTAC (Humanities, Arts, Science, and Technology Alliance and Collaboratory) at Duke University (<https://www.hastac.org>)

While xMOOCs, which have been adopted by all top universities around the world, are the most popular, it is certain that cMOOCs make the most of the revolutionary educational potential of the MOOC, involving both teachers and students in a sharing experience. The role of technology is central in a cMOOC, facilitating the interaction between participants. In contrast, one criticism that is frequently launched at xMOOCs is that they just replicate the classroom environment in a more high-tech environment, thus using technology only to add some ‘spice’ to the traditional learning environment. However, by analyzing an xMOOCs on medical language and terminology that has been designed by the Chair of Modern Languages at the University of Medicine and Pharmacy “Grigore T. Popa”, Jassy, in collaboration with medical and other health care professionals, I will attempt to demonstrate that xMOOCs prove quite useful in creating a bridge between traditional ways of learning and teaching and more innovative ways, especially by making use of digital platforms and technology to enhance motivation and participation.

2.Designing Medical language xMOOCs in Romania

The University of Medicine and Pharmacy “Grigore T. Popa” advertises its medical language xMOOC as “MedLang Palliative Care - Cursuri online pe suport video în domeniul îngrijirii paliative și comunicării medicale”, specifying that it is part of an European project in the framework of Erasmus +, strategic partnerships in the field of higher education. Supporting innovation is one of the main aims of Erasmus +, and the MOOC is an ideal candidate for such a programme, as it potentially meets all the eligibility criteria.

As an xMOOC, the language course for the medical profession follows a similar course design model to many university courses, with the course content being broken down into twenty smaller units that facilitate step by step learning. The MOOC is based on medical palliative care protocols that have been standardized at the level of the European Union and is designed as a twofold course with identical units but different tasks for those who want to develop the practical skills necessary for the implementation of these protocols, on the one hand, and those who want to develop communicative skills and learn the necessary English medical terminology related to palliative care. The start page of the course shows the image of a tree – an apt reminder of the academic tree of knowledge – and the learner can go either to the right side for the medical language course, or to the left for the course on palliative care operational procedures. The language learning course for the medical field is aimed at “medical professionals, university students, language teachers, volunteers or anyone who wants to improve their language skills in health care or social services” (<https://medlang.eu/course/>) and it is made up of twenty units organized around a video presenting a simulation of a palliative care protocol. Additional materials are a vocabulary glossary for each unit, a grammar sheet and a cultural issues sheet that are meant to improve key areas of language acquisition as well as develop cultural awareness and cultural communication skills. The strongest point of the course is the videos: by watching them, students become familiar both with the appropriate procedures to be performed within the palliative care protocols and with the proper language in which these procedures should be explained to patients. Streaming videos sequences are associated with sets of instructions and captions that define and explain the procedures being performed. Video simulation is a great means of enhancing learning, as the learning situation simulates a real context and engages the learner’s attention at more levels: corporal, perceptive, mental and affective. As Young and Asensio note, video streaming has a number of pedagogical advantages that can be grouped into three categories: image, interactivity and integration. In terms of image, a video is able to attract attention and to enhance the retention and recall of new information. Moreover, as students of the digital age have grown up in an

environment which favoured watching television and playing computer games, Gioia and Bass remark that they have developed learning styles where understanding occurs through visual images. A host of education scientists emphasized the connection between visual clues and the memory process, while Goodyear and Steeples claimed that videos provide vivid imagery through which tacit knowledge that is difficult to articulate verbally can be conveyed. Interactive video technology can offer learners more control over the material than the traditional lecture, as it enables them to pause, rewind it or replay it at their own pace. They can use it anywhere and anytime, as well as select what is relevant for them, so video materials can encourage more independent modes of study. At the same time, the integration of videos with other supporting materials such as texts, discussion forums and research links to form a virtual learning environment is a kind of positive redundancy that makes learning more effective. By using both verbal and non-verbal (visual) means of communication, integration leads to a multi-channel communication, in which the processing and storage of information is reinforced by the use of parallel or complementary channels. Integration also adds dynamism to the presentation of materials and can address different learning styles (visual, aural, verbal, logical, social or solitary). By asking the students to produce videos of their own, responding to the input of the videos and simulating palliative care procedures, the MOOC manages to integrate even the seventh learning style (the physical or kinetic).

The twenty units of the language course for the medical field and the course on palliative care operational procedures are: Catheterisation, Paracentesis, Automatic syringe, Transfer in bed, Conspiracy of silence, Active listening, Communicating news, Spiritual assessment, Nutrition, Oral care, Patient bath, Pain Assessment, Pain prescribing, Burn out syndrome, End of life care, Terminal phase, Ulcers and skin lesions, Awareness level, Patients' network and Caregivers' needs. The same videos are integrated into the two courses, but to different ends. While within the framework of the palliative medicine course the videos serve as means to develop skills, in the medical language course they can be used as watching and listening materials, on the basis of which students have to do true or false, multi-choice or matching exercises or permutation activities. The idea of having two different, yet complementary courses based on the same streaming videos shows how effective the design of a MOOC can be, when the high potential of technology is adequately used.

The acquisition of medical terminology and practice of communication for medical purposes in English is facilitated both by the follow-up exercises of the watching and listening section and by the reading and vocabulary section, accompanied by a word glossary. The matching exercises, which in a classroom context are quite boring, become dynamic as the learner has to complete them online by a drag and drop. Especially useful for the future health care practitioner are the matching exercises in which they are required to put together the informal word and its medical /formal equivalent. This type of exercise allows them to perform the mental 'translation' of the medical terminology they learn into 'layman' vocabulary, a practice that is essential for an efficient doctor-patient communication. Another type of exercise that will aid in the communication with the patient is the matching of a doctor's questions with the patient's answers. Communicative skills are further developed in the Speaking section, where learners are required to record themselves while conducting a doctor-patient dialogue and to upload the mp3 file so that it can be peer-assessed on the discussion forum.

Another important part of the material used for the MOOC is the cultural issues sheet. In today's global world, in which immigration, multiculturalism and transnationalism have become stringent issues on every political, social and cultural agenda, health care professionals need to be aware of sensitive cultural issues. For palliative care this becomes even more important, as the

focus of palliative medicine is not on healing, but the on providing relief from the symptoms and stress of a severe illness and on improving the quality of life for both the patient and his family. Providing palliative care for a patient means being aware of his/her cultural background, and adapting it to the individual's level of needs and expectations. Awareness of sensitive issues and cultural specificities can also lead to an improvement in the communication doctor-patient (or, more broadly, health care giver – health care consumer). One can even venture to say that nowadays the education of the health care professionals needs to extend, from the purely theoretical/practical binomial, not only to the development of social/communicative skills, but also to the acquisition of a multicultural and intercultural competence, which would allow the health care giver to improve his interaction with people from other cultures. Moreover, as Tseng and Streltzer note, the patient-doctor relationship is influenced by three types of culture that interact with each other: the culture of the patient, the culture of the physician and medical culture². In order to provide “culturally appropriate care”, it is important for both the physician and the patient to be aware of the cultural factors that can influence them and the medical setting. (9) How Another great advantage of the cultural issues sheet is that, by raising questions to be discussed on the forum, it can engage the attention and participation of the international students that are enrolled in the English teaching module, now a palpable (and growing) presence at all top medical schools. International students can prove an invaluable resource for the acquisition of a multicultural and intercultural competence, as they can provide first hand information and offer feedback on the cultural appropriateness (or inappropriateness) of certain medical practices. For example, in Unit 5, Conspiracy of Silence - Handling Collusion, the thorny issue of withholding information from patients (most often meaning that doctors refuse to accept the responsibility of giving bad news to the patient) is discussed from the point of view of both legislation and medical culture. Thus, while the article makes it clear that according to law the patient has priority in learning the diagnosis, the therapeutic decision is made in a paternalistic manner in most Europe, with the difference that whereas in Western Europe the patient is more autonomous, in Eastern Europe, due to the lack of adequate communication training, the doctor is often persuaded by the family of the patient to engage in a ‘conspiracy of silence’. Another useful cultural issues sheet is presented in Unit 8, Spiritual Assessment, where the role of religion and spirituality is discussed in relation to the patient's understanding of the disease and their level of engagement with the disease. A patient's religion can also influence how pain and suffering are perceived, for example Unit 12, Pain Assessment, provides a discussion on how in Christianity and Islam pain is seen as a kind of redeeming for the soul, thus making the patient capable of developing a more positive outlook if he/she is capable of assigning a spiritual meaning to his/her suffering.

3.The Question of Assessment

The question of assessment is a crucial one in all types of learning, as it influences how learning goals are met, defined or redefined for the future. From the students' point of view, assessment is one of the major tools that motivate performance. Enrolling in a MOOC is one thing, completing it quite another. Many education specialists noted that one of the main downsides of a

² According to Tseng and Streltzer, the culture of the patient influences his/her understanding of an illness, his motivation for the treatment and compliance. The physician's prejudices and biases will “shape the pattern of interaction and communication with the patient”. Medical culture, a set of “traditions and practices that have developed within the medical service setting beyond medical knowledge and theory” (9), can influence for example, whether a patient will be informed about the a fatal illness or the diagnosis will only be imparted to his family in order to protect him/her. This “conspiracy of silence” or collusion is referred to and analysed in Unit 5 of the MOOC.

MOOC is the low-level of completion, which is often due to the inability of such a course to provide accurate assessment. Admiraal et al. note that while “new web technologies allow for scalable ways to deliver video lecture content, implement social forums and track student progress, we remain limited in our ability to evaluate and give feedback for complex and often open-ended student assignments”. (207)

The weak spot of the medical language xMOOC is assessment, which is generally a problematic issue of all MOOCs. The course offers two types of assessment, computer-marked assignments for the online tasks and peer-assessment for the videos and mp3s that the learners are supposed to upload. Although the course specifies that the tasks of the learner include: coverage of the units, according to learner’s interest, completion of the evaluation test of the unit, peer assessment (learner’s evaluation of a colleague’s speaking task, uploaded on forum - 1/2 per module), at least 1 comment per unit on forum and at least 1 comment on cultural issues per unit on forum (<http://medlang.eu/course/>), the learner receives certification if he/she has completed only the first two tasks of the course. Furthermore, as peer-assessment tends to be quite unreliable, there are no peer assessment forms or checklists that may guide the prospective learner-evaluator when assessing a colleague’s work. That assessment is the weak spot of the course is easy to see, as there are 0 comments posted on the discussion forum. This is quite a pity, as the course design and the background materials can prove invaluable aids in the process of learning English for medical purposes. However, the xMOOC can be used as a reinforcement of the on-campus medical courses if the teachers get involved and provide further motivation for completion of the course. Peer assessment forms, which the course lacks, can be designed by the various teachers according to the learning goals they want to promote or the uses they can find for the MOOC. Using the videos and the background materials of the xMOOC as an additional learning strategy for medical students wanting to improve their communication competence should increase the students’ learning motivation and commitment to their learning process as well as make them assume responsibility for their own learning process.

4. Conclusion

As Yolanda Catelly notes, the foreign language teacher in a non-philological university teaching ESP “should resort to more than one restricted model, as by using a blend, there will be higher chances of harmonizing the teaching with the students’ favourite learning styles.” (128) The design of the xMOOC makes it the ideal candidate for extra-classroom practice and development of individual independent learning strategies, especially popular with the new generations of ‘digital natives’, students that have grown up and been educated in an environment of digital media. As Romanian students, even digital natives, have been educated in a more or less traditional school system, where the teacher still retains most of the control over what happens in the classroom, xMOOCs like the one designed by the University of Medicine and Pharmacy “G.T. Popa”, Jassy could act as a bridge between tradition and innovation in learning, encouraging students to look for new ways of learning and helping them to gain gradual control over the learning process.

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