Personalized MOOCs for Language Learning: A challenging proposal

The appearance of Massive Open Online Courses (MOOCs) is a turning point in language education and has the characteristics of online and open language learning access and massiveness. But what is the impact of this new educational reality on teaching and learning a Foreign Language and how could language teachers provide an efficient support to language learners combining collaborative and personalized learning? Is there any MOOC platform that is based on an adequate educational model for successful language learning and teaching?

This paper will try to answer these questions but will first present the different MOOC pedagogical models that are generally used, the current situation of Language MOOCs as well as their general teaching and learning philosophy. It will also analyze the key characteristics of a successful online language learning environment and it will explain how adaptive and personalized learning connected to collective learning could offer an efficient language learning experience. Next, the paper will propose the design of a language MOOC platform that supports adaptive and personalized language learning and embraces autonomy, creativity, social interaction and collaboration. At the end, the author will draw some first conclusions and will share the next steps of her on going research.

1. Introduction

In the last decades, various distance and open learning programmes and online educational delivery models have been developed to address access, affordability, and personalised learning in higher education (Hill, 2012). Nowadays with the advent of Massive Open Online Courses (MOOCs) new online educational models have emerged that promise to offer flexibility, affordable access and fast-track completion for free or at a low cost for whoever is interested in learning (Yuan & Powell, 2013). In fact, MOOCs support the idea of distributed intelligence and lifelong learning, open learning, open educational resources and represent a new generation of online education that encourages the development and delivery of courses that are massive, open, participatory (Perifanou, 2014b).

Generally, the term MOOC has quickly become a catch-all to describe all sorts of unbundled online learning, but there are clearly a number of different models under the same umbrella (Kelly, 2014). So what is a MOOC? “A MOOC is a course of study available over the Internet without charge to a very large number of people: anyone who decides to take a MOOC simply logs on to the website and signs up” (Oxford dictionaries, 2014).
The Horizon Report 2013 has identified the MOOCs development as “the most important trend in education” (Horizon Shortlist Report, 2013) while the Guardian (Boxal, 2012) has compared the evolution of MOOCs to the dot.com phenomenon when “disruptive innovations reshaped the global information, media and news industries, by shifting market power from the established players to parvenu start-ups and alternative providers”. Basically, MOOCs contain key characteristics of disruptive innovations (Bates, 2013). These typically combine a new technology that has the potential to evolve rapidly, with an innovative business model (Christensen, 2003).

In other words, this new form of open and massive education brings new opportunities for innovation in higher education that have already allowed institutions and academics to explore new online learning models and innovative practices in teaching and learning. Some first experiences show that some HE institutions see MOOC development as a sustaining innovation to improve their performance through experiments with new forms of online learning.

But what is the impact of this new educational reality on teaching and learning a Foreign Language and how could language teachers provide an efficient support to language learners combining collaborative and personalized learning? Is there any MOOC system/platform that is based on an adequate educational model for successful language learning and teaching? How PLEs & MOOCs can be connected in a Language Learning Context?

In the following paragraphs this paper will try to answer these questions with specific proposals but will first present the different MOOC pedagogical models that are generally used, the current situation of Language MOOCs as well as their general teaching and learning philosophy. Then, the paper will analyze the key characteristics of a successful online language learning environment and it will explain how adaptive and personalized learning connected to collective learning could offer an efficient language learning experience. Next, it will propose the design of a language MOOC platform that supports adaptive and personalized language learning which emphasizes the building of Personal Language Learning Environments that can promote autonomy, creativity, social interaction and collaboration.

2. MOOC TYPES AND PEDAGOGICAL APPROACHES

There is a variety of pedagogical approaches being adopted in different MOOCs, some emphasizing individual learning through interactive materials, others focusing more on social learning (Conole, 2013). This basically depends on the type of the MOOC and the platform offered by the provider. Generally, the very nature of MOOCs, their structure and the associated pedagogy differ so much that it is even questionable referring to them by the same term. One distinction of MOOCs was made by Stephen Downes who divided MOOCs in two types: 1) The cMOOCs (C for “connectivist”) and 2) x-MOOCs (extended MOOC, similar to standard online courses but with larger student numbers) (Perifanou, 2014b). Siemens (2012) states that “cMOOC model emphasises creation, creativity, autonomy and social networking learning” and “focus on knowledge creation and generation” whereas the xMOOC model emphasizes “a more traditional learning approach through video presentations and short quizzes and testing and focus on knowledge duplication.”

More specifically, the cMOOCs stand in the tradition of Connectivist philosophy, and refer to the work of Ivan Illich. As a sharp critic of institutionalised education, Illich proposed in 1970 to establish “learning webs” by using new technology (Gaebel, 2013). Yuan and Powell (2013) sustain that, “cMOOCs provide great opportunities for non-traditional forms of teaching approaches and learner-centred pedagogy where students learn from one another. Online communities “crowd-source” answers to problems, creating networks that distribute learning in ways that seldom occur in traditional classrooms in universities”. In other words, the connectivist MOOCs encourage creation of artifacts and networked learning. Course products are usually blog posts, images, diagrams, videos etc. However, their success is highly dependent on participants’ interaction via networking tools such as discussion forums, Twitter, Diigo etc. The instructor of cMOOCs has the role of a facilitator who aggregates, reviews, summarizes and reflects on activities in daily/weekly newsletter (Rodriguez, 2013).

On the other hand, xMOOCs have another educational philosophy that focus more on the transmission of knowledge and what educators might term “drill and practice” (Hollands, & Tirthali 2014). They are based on the cognitive-behaviorist pedagogy and support a tutor-centric model that establishes a one-to-many relationship to reach massive numbers category (Bárcena, et.al, 2014). More specifically, these courses are pre-
determined, structured and sequenced in weekly activities. Their educational materials include short, content-based videos, readings, problem sets as well as quizzes (auto-graded) and peer-graded assessments while the discussion forum participation is optional (Hollands & Tirthali, 2014).

Another researcher has also proposed a simplified MOOCs’ classification (Morisson, 2013). He claims that MOOCs differ in basic characteristics: a) the type of the instructional methods used, b) the type of the course materials, c) the level of interaction, d) the activities and assessments provided, and e) the interface of the course site. One more example of MOOCs’ categorization based especially on pedagogy is the taxonomy of 8 types of MOOC that has been developed by (Clark, 2013).

Finally, Conole (Conole, 2013) has made an effort to classify MOOCs in terms of a set of dimensions that can be used to define them such as: “a) the degree of openness, b) the scale of participation (massive), c) the amount of use of multimedia, d) the amount of communication, e) the extent to which collaboration is included, f) the type of learner pathway (from learner centered to teacher-centered and highly structured), g) the level of quality assurance, h) the extent to which reflection is encouraged, i) the level of assessment, j) how informal or formal it is, m) autonomy and n) diversity”.

More efforts of categorisation of MOOCs have been made (Lukeš, 2012; Lane, 2012), as well as interesting proposals, like a process by which educators might “mediat[e] the dichotomy between xMOOC and cMOOC” (Grünewald et al., 2013) or the notion of an “hybrid MOOC” (Waite et al., 2013). Furthermore, some teachers and organisations are rejecting the MOOC acronym altogether, in favour of “SPOCs: Small Private Online Course” (Crimson & Hashmi, 2013), “DOCCs: Distributed Open Collaborative Course” (Jaschik, 2013), “BOOCS: Big (or Boutique) Open Online Course” (Hickey, 2013; Tattersall, 2013) and “POOCs: Participatory Open Online Course” (Daniels, 2013).

Analyzing the different types of MOOCs and the different classifications made by the researchers it is clear that it is not simple neither to classify MOOCs, nor the pedagogies adopted. It is obvious that MOOCs are multiple. Although MOOCs were first launched by connectivists, connectivism is not intrinsic to MOOCs (Clarà & Barberà, 2013) and we can no longer define them either as a single “transformative” entity or clearly position them in terms of the previously dominant cMOOC/ xMOOC binary. What is sure is that open education brings new opportunities for innovation in higher education that will allow institutions and academics to explore new online learning models and innovative practices in teaching and learning, but the process is not easy (Yuan & Stephen, 2013). In general, a much greater up-front investment of resources, time and careful planning is needed when designing distance-learning courses (Casey, 2012). In this case, researchers, teachers, instructional designers, policy makers are still exploring possible learning and teaching scenarios for the design, organization and implementation of successful MOOCs. The truth is that there is not a single scenario but there are many factors that need to be considered like the different disciplines, the educational needs of the learners, the platform chosen and the pedagogy that could support, the teacher’s role, the material (“open” or not) intellectual property issues, assessment, analytics, costs etc.

In the next paragraphs will be discussed the current situation of language MOOCs as well as a series of MOOC problems that need to be resolved in order to design more efficient MOOCs in future.

3. LANGUAGE MOOCs (MoolCs) & “OPEN” MOOC ISSUES

A considerable amount of research has been conducted in the last decades with regard to distance language learning, and generally to Computer Assisted Language Learning that has shown the tremendous possibilities that technology can offer in the field of language learning (Perifanou & Economides, 2014). Nowadays with the advent of MOOCs, even though there is a hype surrounding their arrival on the academic horizon (Barber et al. 2013) there is little evidence of research related to the potentials of MOOCs in Foreign Language Education and a lot of un-addressed issues. Despite this, there is a growing interest about Language MOOCs as they are multiplying at a rapid pace (Perifanou & Economides, 2014; Gee, 2012). According to the findings of this ongoing research, currently there are more than 16 MOOC platforms that offer more than 50 free Language Learning courses. More than a half of them are English Language MOOCs but there is also a great interest for other languages like Arabic, Spanish, Japanese, Chinese etc. (Perifanou & Economides, 2014). One example is the case of a German Language MOOC that won the First Prize for the Best MOOC in the Miriada X platform (Castrillo, 2013). Another example is the case of the three language courses offered by the platform “I learn” (“Aprendo”/UNED). The Language MOOCs of this platform were the most populated courses. In fact, the students that have enrolled in the English courses reached both...
the number of 78.690 while 22.438 students enrolled in the “German for Spanish speakers” course (Read & Rodrigo, 2013).

Based on these findings, it is clear that language skills are in much demand and the need for related on line courses is widespread. This can be justified as language literacy is one of the essential skills for the 21st century (Stoll & Giddings, 2012). Generally, with the advent of Web 2.0, language competencies and intercultural skills are more than ever key qualifications for everyone who aims to work and live in this new reality. This growing interest for language literacy constitute Language MOOCs as an evolving and expanding area with new developments likely to offer greater variety of courses and more innovative social learning pedagogies. Currently, practitioners, language teachers, instructional designers are exploring how to design efficient language courses that have the characteristics of open access and massiveness.

The results of this ongoing research (Perifanou & Economides, 2014, Perifanou, 2014a, Perifanou, 2014b) have shown that there are still many issues that need to be resolved and for that reason there are teachers (Robinson, 2013) and researchers (Read, in press; Romeo, 2012; Monje, Bárçena, & Read, 2013) who sustain that MOOCs’ format is especially problematic for the Language Education context. More concretely, the pedagogy adopted in Language MOOCs in most cases lacks interactivity and follows a cognitive behavioral and one–to–many pedagogical model which mostly offers automated or right-and-wrong answers (Perifanou & Economides, 2014). That means that these courses don’t allow learners to develop their own learning initiatives/pathways and they are not learner-centered and peer drive. Additionally, they don’t support community building and they don’t promote collective intelligence as well as user created and informal content. Furthermore, the current type of Language MOOCs don’t allow learners to build a personal network of people, who can offer feedback and support. Most MOOC platforms can accept a massive number of participants, offer usability, have good technical performance and provide high security but they offer a poor variety of communication tools (synchronous & asynchronous) (Perifanou & Economides, 2014). This prevents learners from interacting with other learners as well as with authentic audience. The time zone differences are also important barriers for students’ interaction and collaboration. The high heterogeneity among students’ profile (language level, learning needs and objectives/intentions, learning style etc.) is also a big issue because it is impossible for a language teacher to provide a successful language lesson (Perifanou, 2014 b). Besides this, the unbalanced teacher-student ratio remains also a big issue (Romeo, 2012; Monje, Bárçena, & Read, 2013). Providing feedback to a massive number of students is really difficult especially if there is no teachers’ group support. Even though assessment is not the priority of a Language MOOC but the development of specific skills such as basic language skills (reading, writing, listening, speaking), good communication skills, higher order thinking skills, cultural skills etc., it needs lots of effort and time to support the entire learning process of the participants. As it is shown in recent researches (Read, 2013; Monje, Bárçena, & Read, 2013) the lack of support from teachers, who cannot respond to all learners’ requests for advice remains the main reason for the big number of dropouts. It’s worth mentioning that the monitoring of students’ performance in MOOC platforms can be enhanced by automated learning technologies like Analytics and Semantics (UUK, 2013) that can provide an extremely useful summary but this still is not a solution. Language MOOCs need the continuous teachers’ support during the language course. Furthermore, it’s important to be added that most of the platforms don’t use tools that could support peer assessment which could definitely provide a great support to the learning process of participants.

Apart from the issues that are already mentioned, content and intellectual property as well as permission for organizing or teaching a language course are also some issues that need to be carefully examined because there is no common rule. For example, in platforms like Coursera, either the professor or the university owns the intellectual property while Udemy’s professors also own the content and the intellectual property. There is typically joint ownership between Udacity and any outside. That means that even though MOOCs are characterized as “open access,” in fact that means that anyone can enroll for free, but they are rarely “open” in the OER sense. Regarding the creation and teaching of a MOOC, the situation differs as well depending the chosen platform. For example, platforms like Coursera and edX are largely “closed platforms” and that means that in order to create a course, you must be a faculty member at one of their partner universities. On the other hand, other platforms like Udemy, P2PU, and Canvas.net, operate under a different logic, allowing a much wider array of individuals to design and teach courses (Kelly, A. 2014).

Bearing in mind all these important issues, this paper proposes an adaptive & personalized language learning MOOC system/platform that is based on the Massive Open Online Interactive Language Learning Environment (MOILLE)’s framework
elements. This framework has been analyzed in previous publications and it is part of the same research that the author of this paper is conducting. In this research it is warmly believed that designing an efficient language learning environment that could be adapted to the learning needs of a massive number of language learners remains a big challenge for language teachers and instructional designers.

Before the presentation of the proposed Language MOOC platform, it is important to analyze why social interaction, authentic collaboration and building community in combination to personalized learning are key factors for a successful language learning course massive or not.

4. KEY FACTORS FOR A SUCCESSFUL ONLINE LANGUAGE LEARNING ENVIRONMENT

Alm (Alm, 2016) maintains that an efficient Language Learning environment consists of two learning communities: the learning community in the classroom, and the target language community. It is known that increasing contact with the target language appears to be one of the most critical factors for successful Language Learning. Language is about communication, and there is nothing more motivating than being able to use one’s newly acquired language skills in an authentic environment (Perifanou, 2010). New technologies can facilitate this process. But which are key factors for successful Language Learning generally and how these can change in an online environment?

A framework that briefly describes the prerequisite conditions for successful Language Learning has been proposed by Egbert et al. (1999). They mention eight key factors: 1) Learners have opportunities to interact and to negotiate meaning; 2) Learners interact in the target language with an authentic audience; 3) Learners are involved in authentic tasks; 4) Learners are exposed to and encouraged to produce varied and creative language; 5) Learners have sufficient time and feedback; 6) Learners are guided to attend mindfully to the learning process; 7) Learners work in an atmosphere with an ideal stress/anxiety level; 8) Learner autonomy is supported. Based on this framework, it is clear that an efficient Language Learning environment should be enjoyable and should provide opportunities for authentic interaction and authentic tasks to the learners. Furthermore, it should support learners’ autonomy and should give them sufficient time for practice and the possibility to get feedback and guidance when they need them. (Perifanou, 2014a).

The advent of Internet has brought positive results to Language Learning as it has succeeded to bridge the learning distances. Nowadays, the Web 2.0 innovative and disruptive technologies have brought together the classroom’s Language Learning community with the target language community in multiple and motivating ways (Perifanou, 2009). In fact, they have facilitated some of the key characteristics for successful Language Learning like: input/output, social interaction, authenticity, exposure, feedback, and learner autonomy.

This new technological reality has brought also a great impact on the teaching and learning methodologies. In fact, those have started to focus mostly on cognitive and sociocultural theories and less on behaviorism (Scarino & Liddico, 2009).

Some critical factors that should be considered by language teachers and instructional designers before the organization and implementation of a successful online learning course are described by Dillon and Gunawardena (1995) who have identified technology, instructor characteristics, and student characteristics as two critical factors in online learning. Additionally, Volery and Lord (2000) recognized technology, instructor, and previous use of technology as the three critical factors. Similarly, Alberth (2011) argues that a number of other critical factors such as instructional design (pedagogy), unit characteristics, provision of support for both instructors and students, should be seriously taken into account when considering opting for online delivery.

The question that is emerging is if all these factors change when we have to organize online language courses that are targeted to a massive number of participants. This paper aims to emphasize that a Language MOOC cannot be efficient if it doesn’t take place in a learning environment that is based on an adoptive and personalized system which promotes and sustains collaboration and interaction among language learners as well as with authentic speakers. In the following paragraphs, it will be analysed why adaptive and personalized learning is important in a Language Learning context.

5. PERSONALIZED LANGUAGE LEARNING

Continued Learning process: key issues

Learning a foreign language is not an easy process. It needs a great personal effort, an easy access to authentic materials
and a continue contact with authentic speakers. The advent of new Web 2.0. technologies was a turning point for Language Education as it brought unlimited opportunities for authentic interaction as well a great variety of resources and tools that could support efficiently the whole language learning process.

Language learners though don’t follow a common learning “scenario”. Each of them have different learning needs and learning objectives as well as a different learning mode and learning capabilities. That means that language teachers should take under consideration how a learner could learn faster and easier a foreign language. In other words, language teachers should try to explore learners’ motivations and the language learning strategies that would be suitable for them. According to Wenden and Rubin (1987) and Oxford (1990), the term ‘strategy’ in the field of Language Learning indicates that a language learner uses a specific action or behavior to improve language performance. The language learning strategies (LLS) have been classified into three categories: metacognitive strategies, cognitive strategies and socio-affective strategies (O’malley & Chamot, 1990). Oxford (1990) proposes three types of social LLS: a) asking questions (i.e. Asking questions for clarification and verification or for correction, b) co-operating with others (i.e. Co-operating with peers, or with proficient users of the new language), and c) empathizing with others (i.e. Developing cultural understanding, or becoming aware of others’ thoughts and feelings) (Oxford, 1990, p. 21). According to Rubin (1975), the majority of language learners would use the social learning strategies in learning a foreign language (i.e. English) more than the other strategies. Furthermore, the researcher adds that the good language learners would apply different strategies in learning and using a language, whereas the poor learners would use the same strategies in their learning. In every case the important issue is that there is no a single way of learning a language for everyone and that each learner is a unique case and needs to make his/her own choices. That means that a personalized way of learning that takes place in an authentic environment with the language teacher’s support as well as the support of the peers would be an ideal way of learning a language.

PLEs and Language Learning

According to Lantolf and Thorne (2006), personal learning can be increased through forms of collaboration with their peers and the teacher. They mention that feedback on the learner’s performance is crucial in defining the Zone of Proximal Development (ZPD)\(^1\), in that the help is internalized and the responsibility for learning gradually shifts to the learner. This is what happens with the use of the Personal Learning Environments (PLEs). PLEs are interesting environments that allow learners to discover their ZPD on their own (Tochon et al., 2014). According to Attwell (2007), personalized learning offers a real opportunity for learners to fully participate in their learning process and become co-producers and co-creators of knowledge. Becta (2008) uses the following key words and phrases to describe essential characteristics of personalizing learning: personal goal-setting inclusion; choice and preference; engagement and participation; responsiveness; flexibility; tailored and adaptable; and, enabling independence.

The principal philosophy of PLEs is the learner-centered approach since they are based on informal learning and constructivism and on social constructivism or “connectivism,” (Siemens, 2005) in particular assigning the user the basic role of knowledge building, via the creation of communities and the creation, remixing and sharing of resources. Harasim (2012) sustains that the pedagogical models that support the principles of personalized learning is connectivism, pedagogy 2.0, and online collaborative learning pedagogy.

This paper supports that the creation of Personal Language Learning Environments should be with no doubt the best method for learning efficiently a foreign language. Extensive research has shown that Personal Learning Environments (PLE’s) are learner-centric, providing relevant and timely learning opportunities by enabling individuals to select, integrate and construct knowledge using various software, services and options based on their needs and circumstance. In other words, learners are allowed to make decisions that best suit their goals and needs for acquisition of skills, knowledge creation, social interaction and collaboration (McLoughlin, 2013).

Bearing in mind the analysis made earlier, it is clear that language learners should make their own learning choices based on their language learning needs and objectives keeping though the teachers’ and peers’ valuable support. This idea is in line with the principle that is underpinning a PLE; that learners exercise greater ownership and control over their learning experiences, rather than being constrained by centralized, instructor-controlled learning based on delivery of pre-fabricated curriculum (McLoughlin, 2013).

\(^1\) Vygotsky (1978) defined the ZPD as “the distance between the actual developmental levels as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p. 86).
6. AN ADAPTIVE & PERSONALISED LANGUAGE LEARNING MOOC SYSTEM/ PLATFORM

Connecting PLEs, Adaptive Learning and MOOCs in a Language Learning context

Based on the previous analysis, the creation of a personalized and adaptive language learning environment where language learners can form their own personal learning space using a combination of tools, applications and services that could support them during the learning process seems a very promising way of learning a foreign language.

The question that we need to explore is if MOOC technology can support personalized learning, and if yes, in which ways? From a pedagogical perspective and based on research findings MOOCs and especially the type of connectivist MOOCs can support personalized learning. MOOC can facilitate not only connection-forming and group-based learning but also the formation of individual, personal learning environments, or PLEs (Layton, 2013). It is also shown that cMOOC is based on the Personal Learning Environment (PLE) model while the xMOOCs are just an extension of the LMS (Keairns, 2013). In fact, recent research (Koutropoulos, 2013) makes clear that cMOOC can bring together diverse platforms to enable learning through a common platform and through a learner’s PLE. Furthermore, cMOOCs encourage active exploration on the part of the learner, sharing with other learners, generating knowledge, and reflecting on learning. These type of learner-controlled spaces often take the form of a Personal Learning Environment (PLE), and in such spaces learners choose their connections and sources of materials. In that case, learning happens when students interact with authentic materials, in learner-controlled spaces (Koutropoulos, 2013).

That means that cMOOCs provide, from a technological perspective, the appropriate technology that support self regulated and personalized learning. In other words, the platforms that are used for cMOOCs offer a variety of tools that could support this type of learning.

One of the aims of this research, that is still in progress, is to show that an adaptive learning system could better support Language Learning, even though the technology used for cMOOCs can support personalized learning in combination with collaborative learning.

According to the Chronicle of Higher Education (2013), MOOCs and adaptive learning software are often characterized as two of the most potentially game-changing technologies in higher education. It would seem natural to combine MOOC platforms, which accommodate thousands of students, with adaptive learning software, which responds to the needs of individual students (Kolowich, 2013). In fact, Feldstein believes that MOOCs and adaptive software form a “natural marriage” that “could help compensate for the absence of individual holding in a massive course (Nielsen, 2014). It is impossible to adequately staff the course with enough qualified facilitators when there are hundreds of thousands of enrollees. Adaptive media could be used together with the teachers’ input and social media such as forums, social grading, and study groups (Nesterko, 2013). More concretely, adaptive learning systems can offer dynamic and interactive content, placing the student at the center of his or her individual learning experience. Adaptive learning technologies enable education to be personalized to the individual student. Computer-based tools are used to adapt learning paths to individual students based on learning needs. In other words, the course adjusts to the student (instead of the other way around, as is the norm) on a continual basis, based on data collected as the student moves through the program. Data can also be used to track and evaluate their experiences, and interventions can be targeted to students who are struggling. Furthermore, adaptive learning allows a better comprehension of material because students spend as much time as they need on topics (until they master them) before moving on (Austrade Insight Report, 2013).

Few positive results of introducing adaptive learning to MOOCs would be the reduction of the big dropout rate of participants, their higher engagement and of course the higher enrollment for adaptive MOOCs (Austrade Insight Report, 2013). Even though it is believed that an adaptive MOOC is complicated to be created (Kolowich, 2013) the first adaptive MOOC has been developed by Synaptic Global Learning in partnership with the Center for Innovation and Excellence in eLearning of the College of Advancing and Continued Studies, University of Massachusetts Boston. After many experiments and studies on the application of adaptive learning in personalized online learning, they have created the first adaptive MOOC (aMOOC) platform, providing a strong pedagogical framework and a personalized learning experience in a MOOC learning environment. This is a case of a MOOC that adapts to the learning preferences of individual learner using brain-based adaptive learning with learning strategies (apprentice, incidental, inductive, deductive and...
discovery) and this process can lead to much higher completion. These learning strategies allow students to pursue the study of difficult subjects within the pedagogical environment that works best for them. The topic of this first aMOOC was related to the area of molecular dynamics for the computational discoveries in science and it was really successful in handling the large loads of the Massive Open Online Course and concurrent user stress. In fact, it is shown that the cloud architecture that was adopted by the system was necessary to accommodate expected large loads for a MOOC. One of the most important research results was that the pedagogy and technology developed for the adaptive MOOC could be a great promise for the future creation and conversion of the one-size-fits-all MOOC into effective adaptive MOOC (Sonwalkar, 2013).

One other effort of adaptive learning, that is connected to Language Learning, has been made by Instreamia. This is a language-learning platform that has sponsored last year a Spanish language MOOC with s big success. This platform uses exercises that adapt to users needs as they go along (Nielson, 2014). More concretely, the system gives first a test to the learner in which an objective is offered and the learner is trying to understand native content. Then it identifies the strengths and weaknesses, and proposes the exercises according to the needs of every learner. It also offers the grammar principles that a learner needs for every objective through video. The system continually adapts to each learner’s needs and helps solidify his/her understanding. Apart from the writing assignments that the system proposes to each learner the system automatically pairs every learner to a classmate so they can both practice the objective together. In the end, a quiz that is similar to the first test is assigned to every learner.

In the following paragraphs, will be presented a proposal of the design of an Adaptive & Personalized Language Learning MOOC System/Platform that is still under exploration.

A proposal of an Adaptive & Personalized Language Learning MOOC system/ platform

In the previous phases of this ongoing research it has been conducted a) an exploration of the current state of Massive Open Online Language Courses (MOOLCs), b) a proposal of the Massive Open Online Interactive Language Learning Environment (MOILLE) framework that aims to help those who are interested in designing and evaluating an efficient Massive Open Online Language Learning MOOC, c) A classification and evaluation of every MOOLC based on MOILLE framework, d) Analysis of the most important issues related to the creation of MOOLCs and possible solutions, f) Proposal of some practical ideas for the creation of interactive platforms for successful MOOLCs.

In this phase of the research, we propose the idea of an Adaptive & Personalized Language Learning MOOC system/ platform (Fig.1, 2), taking under consideration the theoretical analysis presented in this paper, the MOILLE framework as well as a series of conclusions that were found during the previous stages of this research (Perifanou & Economides, 2014; Perifanou, 2014a, Perifanou, 2014b).

The diagram that follows (Fig.1) presents the first step of the process that all participants need to follow. That is a placement language test, a diagnostics quiz called “Pretest”, that each participant will have to take. Based on the test’s results an automated pattern-matching system’s tool will identify the language level attained by each learner and will automatically enroll him/her in one of the three proposed courses (A1/A2, B1/B2, C1/C2).

Fig.1 Adaptive & Personalized system for MOOLCs (A)

After the completion of the course, participants can repeat a “pretest” that will be different each time in order to check their language level again and following this the system will enroll them in a new language course (advanced or not).

Besides the “pretest” each participant will need to create a personal profile (answer a list of questions and choose the most suitable answer) providing a number of basic information about themselves like their learning objectives, their mother tongue, their preferable mode of learning (in collaboration, autonomous), collaborative tools that would prefer to use
during the course, their time zone and their time availability for synchronous or collaborative activities and topic of interests, etc. Then, an automated pattern-matching system’s tool will propose/match either a self paced, and/or a peer to peer and/or group/s program of language learning, with complementary knowledge, skills and learning objectives or (Fig.2). Each participant will be able to choose between the proposed themes/topics proposed by the system and choose between the options of learning mode that he/she prefers each time.

Fig.2 Adaptive & Personalized system for MOOLCs (B)

Teachers will also have to create their personal profile as well to provide personal information about their time availability, the level of lessons they want to teach, the activities they prefer to organize, etc. That means that based on teachers’ profile the platform will automatically match teachers’ profiles (based) to learning groups.

As far as the collaborative and peer to peer activities are concerned, the platform will also support language learners’ authentic communication and collaboration with the provision of an “open status”. That means that the system will be able to give information about the current status (online/offline) of learners and teachers (selected for each learner) and support in this way a synchronous communication, authentic interaction and feedback. The number of participants in a group will be limited to 10 learners in order to have most efficient language learning outcomes. The number of teachers for each course will vary depending on the availability of teachers. Teachers will also scaffold all self-regulated projects.

The learning material used will be authentic and mostly open source (OERs). It will be divided in specific themes/topics and each level will offer a big variety of activities depending on the mode of learning (self, peer, group) that each participant will choose. All the individual, peer to peer and group activities will support the creation of learning objects like language and culture projects, Power Points, films, annotated interview videos on the themes being explored, etc. Game based activities will be also greatly promoted.

All the language learning activities will support not only language awareness (practice of all basic language skills) but also the development of several skills (cultural skills, social learning skills, higher order thinking skills etc.) and will also promote learners’ motivation and their continuous engagement with continuous feedback (peer, teacher’s, automated).

All the language activities including synchronous and asynchronous interaction will be facilitated by a variety of innovative tools and widgets that participant will be able to choose between, like: 1) Language specific tools & collaborative tools (Collaborative writing tools, translation vocabulary and dictionary widgets, spell checker, text to speech synthesizer, voice recorder and playback), 2) bookmarks/webpages (recommended websites, resources, exercises), 3) Quiz (online exercises tools) 4) Social networking (social networks and bookmarking), 5) communication (videoconferencing, chat, discussion forums), 6) Content creation (users blogs, wikis), 7) Media repositories (video, images, slides, sounds), 8) Multimedia players (podcasts, web radio, web tv), 8) RSS (Italian, English... newspapers and magazines feeds and blog feeds), 9) Miscellaneous Tools and widgets (to do list, calendar) etc.

As far as the assessment is concerned, as it was mentioned before there will be a multiple evaluation system (pre-ongoing-post). Apart from the “pretest”, many tests will be used in order to help instructors to track what knowledge and skills participants gain as a result of their participation in the courses and how pedagogical strategies impact these outcomes. A continuous “feedback” on students’ performance via testing activities will allow for iterative improvements in materials and activities. Besides that, peer assessment will be used and will be enhanced by relative social tools and the use of peer badging. The use of badges will be introduced in order to engage students and increase their motivation.

It is also worth mentioning that the platform will use analytic tools to support quality of MOOLCs through the analysis of specific factors (level of participation, type of participation, time of participation, number of questions etc.). The massive data sets that this platform will generate means that complex
patterns of MOOC participation can be examined, visualized, analyzed and discussed in detailed and very fruitful ways.

Furthermore, this platform will support the creation of Personal Learning Networks as each member of the MOOLC platform will be able to follow other users and connected using Friend and Friend of a Friend (FOAF) relations. The proposed MOOLC platform will have also a responsive design and will be accessible through different devices (tablets, smartphones etc.). In this way, language learners’ and teachers’ activities will be supported in the most efficient way.

It is believed that this type of a MOOC platform will be ideal for Language Learning because the learning environment becomes more personalized and tailored to the needs, abilities and interests of each participant despite the massive number of enrollees. At the same time, all language learners have the possibility to choose the mode of learning that they prefer, the tools that they want to use, the topics that they like, the time that best suits them to do language activities, interact with other peers and build their own network. In this way, it is hoped by the instructional designers that language learning will be accelerated, score results will be improved and generally all the learning goals of the participants will be fulfilled in the most productive, authentic, enjoyable and student centered way.

7. CONCLUSIONS

MOOCs promise to offer flexibility, affordable access and fast-track completion at a low cost for whoever is interested in learning (Yuan & Powel, 2014). Though, MOOCs have been criticized as a one-size-fits-all solution to a many-sided problem (Nielson, 2014). The reality is that MOOCs or one common type of MOOCs cannot be the “solution” for every educational need. The main aim of this research is to explore if it is possible to introduce MOOCs in order to learn efficiently a foreign language and how this can be done. More specifically, this paper has analyzed why learning a foreign language is not an easy process and why it is needed a detailed and careful course design, qualified teachers, a very good organization and a MOOC platform that provides all the necessary tools in order to acquire language learning skills in courses of a massive scale. It has also shown that adaptive learning could be incorporated into MOOCs to produce some of the most powerful language learning models we have seen so far.

To this end, it was made an attempt to propose an Adaptive & Personalized language learning MOOC system/ platform that supports adaptive and personalized language learning and emphasizes the building of Personal Language Learning Environments which promote autonomy, creativity, social interaction and collaboration. The core educational idea that supports this system is a personalized way of language learning that takes place in an authentic and learner-centered environment with the language teacher’s support as well as the support of the peers.

There are still many issues that need to be resolved in order to organize successful language MOOCs that will persuade teachers and researchers who sustain that MOOCs’ format is especially problematic for the Language Education context. The research in this field is still in progress but the future of language MOOCs looks very promising. A next aim of our research is the development and implementation of the proposed Adaptive & Personalized Language Learning MOOC platform. We believe that this project will give us very important results that will contribute significantly to this research area.
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