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Artigo

SMOOC: ECO – E-LEARNING, COMMUNICATION AND OPEN DATA – PROJECT CASE STUDY

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ABSTRACT

This article is a reflection on the proposal of the course "sMOOC Step-by-Step" in the ECO Project - "E-learning, Communication and Open Data" whose general objective was to support and encourage initiatives offering massive online open courses (MOOC). The article presents a case study in the descriptive perspective and qualitative approach in order to achieve if "MOOCs give an answer to the training needs lifelong citizens in the twenty-first century?". The research is aligned in the observations made in the virtual learning environment (VLE) in the ECO platform, in a period of 30 days / 75 hours by two participants of the Portuguese group. The evidence was collected by the techniques of participant observation and documentary research. The analysis of the evidence was concluded that the model sMOOC contributes to the training needs lifelong citizens in the twenty-first century. But it warned to be greater attention as imperative to training in learning network to obtain higher frequencies of interactions through the development of a participatory culture among participants.

Keywords: Massive open online course. MOOC. sMOOC.

RESUMEN

Este artículo hace una reflexión acerca de la propuesta del curso "sMOOC Paso a Paso" en el ámbito del Proyecto ECO – "*E-learning, Communication and Open Data*" cuyo objetivo general fue apoyar e incentivar las iniciativas de la oferta de cursos abiertos masivos online (MOOC). El artículo se presenta como estudio de caso en la perspectiva descriptiva y abordaje cualitativo, para determinar si "¿Los MOOCs dan respuesta a las necesidades de formación a lo largo de la vida para los ciudadanos en el siglo XXI?". El estudio está alineado a las observaciones realizadas en el ambiente virtual de aprendizaje (AVA) en la plataforma ECO, en un período de 30 días/75 horas por dos participantes del grupo de portugués. Las evidencias fueron recolectadas por las técnicas de la observación participante e investigación documental. Del análisis de las evidencias se concluyó que el modelo de sMOOC contribuye con las necesidades de formación al lo largo de la vida para los ciudadanos en el siglo XXI. Pero, se alertó que es imperativo tener más atención a la formación en red de aprendizaje para obtener mayores frecuencias de interacciones por medio del desarrollo de una cultura participativa entre los participantes.

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Palabras clave: *Cursos abiertos masivos online.* MOOC. sMOOC.

RESUMO

Este artigo faz uma reflexão acerca da proposta do curso "sMOOC Passo a Passo" no âmbito do Projeto ECO – "*E-learning, Communication and Open Data*", cujo objetivo geral foi apoiar e incentivar as iniciativas da oferta de cursos abertos massivos online (MOOC). O artigo se apresenta como estudo de caso na perspectiva descritiva e possui abordagem qualitativa, buscando analisar se "os MOOCs dão uma resposta às necessidades de formação ao longo da vida aos cidadãos no século XXI". A pesquisa se alinha nas observações realizadas no ambiente virtual de aprendizagem (AVA) na plataforma ECO, em um período de 30 dias/75 horas por dois participantes do grupo da língua portuguesa. As evidências foram coletas pelas técnicas da observação participante e pesquisa documental. Das análises das evidências concluiu-se que o modelo de sMOOC contribui para as necessidades de formação ao longo da vida aos cidadãos no século XXI. Porém, alertou-se ser imperativo dispensar maior atenção à formação em rede de aprendizagem para obtenção de frequências mais altas de interações por meio do desenvolvimento de uma cultura participativa entre os participantes.

Palavras-chave: Cursos abertos massivos online. MOOC. sMOOC.

INTRODUCTION

It is widely known that changes which take place in society derive from the comings and goings of man's action as a rational, social, economic, and communicative being, as the product of our desire to grab hold of consumer and intellectual goods. A desire that is intrinsically conditioned by our social history. It is believed that the notion of human interest is introspective in our minds. Therefore, in this search humans come across information and communication technologies (ICT) that may bring us closer to or take us away from a given social group. Oftentimes, ICT leads people towards formal and informal education. Possibly in an effort to solve some human detachment issues, some higher education institutions across the world have set up partnerships and invested their own resources to develop initiatives aimed at continuing education, self-education, and accreditation. These schools have put together programs oriented to the modern world's network and/or individual needs, and containing activities and content distribution.

The ECO (Elearning, Communication and Open-Data) Project was created in the European Union to support and encourage massive open online courses (MOOC). The project was meant to pay special attention to the training of European teachers by giving them the conditions to create their own online courses via the ECO Project portal and open educational resources. By so doing, they could have a positive impact on other education communities.

Under the ECO Project, Open Educational Resources (OER) were believed to have the potential to broaden access to education and to improve the quality and cost-effectiveness of teaching and learning in Europe. According to the ECO project's proposal, the best way to put OERs into practice was through Massive Open Online Courses (MOOCs). Hence, the ECO project would differ from the cMOOC and xMOOC models as it sought to strengthen the relationship of networked communication, methodology, a communicative, pedagogical model of multi-way communication (everyone with everyone), dubbed sMOOC by the ECO Project.

The purpose of sMOOC was to break with the model based on broadcasting, playing back, and one-way models such as the TV, radio, and mass media models. To do that, the idea was to use "the latest

technologies to set up the MOOC Aggregator platform [...] which will allow for the combined and trans-border pilot activities to be carried at all hubs involved in the project" (PROJETO ECO, 2015).

According to the ECO Project (2015), sMOOCs differ from other MOOC types because are "social", providing a learning experience marked by social interactions and transparent participation, accessible from different platforms and through mobile devices and integrate with participants' experiences through contextualization of content, activities, and gamifications. Generally speaking, we can say that sMOOCs tend to fulfill the goals of equality, social inclusion, accessibility, quality, diversity, autonomy, and openness through users' mobile devices.

The reference of the ECO Project, funded from the European Community's CIP[3], resulted in the design of the "sMOOC Step by Step" course in six languages on the "ECO+OpenMOOC" platform. The ECO Project (2015) states that open educational resources have the potential to broaden access to education and to improve the quality and cost-effectiveness of teaching and learning in Europe through MOOCs.

Castaño, Maiz, and Garay (2015) highlighted that,

> *En los últimos meses, los denominados MOOC están recibiendo gran atención en la literatura científica, presentando una nueva manera de enfocar la formación que está atrayendo a millones de alumnos em todo el mundo y que está alterando la manera en que las universidades presenciales conciben la formación online. [...] La magnitud de los MOOC, la rapidez de su incremento y las profundas cuestiones que parecen estar aumentando en relación con los fines de la educación superior y el futuro de la universidad, indican claramente algo realmente nuevo, algo más que una simple moda* (CASTAÑO, MAIZ and GARAY, 2015, p. 20).

However, the use of MOOC in a training course placed it at the center of the academic and scientific community's attention, which questioned its educational application. From the "sMOOC Step by Step" standpoint, MOOCs would transcend the idea that they are deemed a mere fad.

In order to contribute to the discussion, especially regarding the sMOOC model, we looked into the very question about the sMOOC Step by Step course, namely "Do MOOCs meet the lifelong training needs of people in the 21st century?" This paper is a descriptive case study using a qualitative approach. Data collection was based on the participatory observation technique, document review, and source triangulation analysis, according to Colás and Buendia (1992). Along this methodological line, first a definition of MOOC (massive open online course) is give. Next, the "sMOOC Step by Step" scenario is put into context using data presentation and analyses. It should be noted the study was conducted by two members of the Portuguese language group in the virtual learning environment (VLE) on the ECO platform over a period of 30 days/75 hours.

The next section presents the types of MOOC - massive open online course.

MOOC – MASSIVE OPEN ONLINE COURSE

MOOC (Massive Open Online Course) is a term coined by Dave Cormier who, according to Albuquerque (2013, p. 62), in the "What is a MOOC?" video produced by Dave Cormier himself in 2010, explains that "MOOC is a course, it is open, participatory, distributed, and supports life-long networked learning." The acronym MOOC originated

[3] Project funded from the European Community's CIP (Programme under grant agreement n° 21127).

in 2008 from the experiences of Stephen Downes and George Siemens as they delivered their "Connectivism and Connective Knowledge - CCK" course. According to Bartolomé and Steffens (2015), the designers of that MOOC had grown weary of discussing the applications of connectivism and believed the best way to apply the connectivism principles would be to put them in practice on an online course. Consequently, after debates held at the Desire21Learn conference, Downes and Siemens devised an online course they called Connectivism and Connective Knowledge (CCK).

The course was presented to 25 tuition fee-paying students at the University of Manitoba (Canada), in addition to 2,300 other students from the general public who took the online class free of charge, thereby taking part in the first massive open online course. Downes (2013) points out that, after the experience of Siemens & Downes' CCK course in 2008, many other MOOCs have been developed. There have been approximately 40 MOOCs in different countries. However, MOOCs became more visible through "courses offered under the seal of elite US institutions such as the Massachusetts Institute of Technology (MIT), Stanford University, and Harvard" (ALBUQUERQUE, 2013, p.63). Despite beginning in 2008, it would take years for the academia and the press to realize MOOCs could be used as a new way of fostering distance education.

By definition, the MOOC acronym's strictest meaning in fact requires these courses to be online, open, and massive. This reference steered the courses to be developed on an online platform using web 2.0 resources and social media. As for being open, MOOCs are supposed to be free of charge, requisite--free, and easily accessible to participants. Because they are massive courses, they tend to involve a large number of participants. In Downes' words (2013):

> So what is essential to a course being a *massive* open online course, therefore, is that it is not based in a particular environment, isn't characterized by its use of a single platform, but rather by the capacity of the technology supporting the course to enable and engage conversations and activities across multiple platforms. (DOWNES, 2013).

Downes (2013) underscores that the integration between multiple resources and – multiple – platforms is an essential characteristic of MOOC development. Additionally, interactivity must be enabled and participants should be encouraged to interact. On another note, MOOCs must not be restricted to a closed or private environment, nor to a single platform. Despite MOOC standing for massive open online course, not all MOOC fully live up to that description. Spilker and Nascimento (2014, p.8) tell us that "The term MOOC is at times misleading. Wiley (2010) says some MOOCs are massive, but not open; some are open, but not exactly what could usually be deemed massive." However, they believe the online application to be their shared trait, as all MOOCs make use of this element to take place.

Across the world, some higher education institutions have developed distinct MOOC models and given them different names, such as cMOOC, xMOOC or sMOOC, as they are oriented to networked learning, task performance, content distribution, either aimed at continuing education, accreditation training and/or self-learning, in collaboration or using their own funds.

With respect to this variety of MOOCs, it should be noted that the cMOOC connectivist model is a more content-developing and self-instructional distribution model like xMOOC, also known for its commercial characteristics. However, the *c*MOOC model emphasizes students' active participation in the creation of knowledge, creativity, autonomy,

and shared, collaborative learning. The xMOOC model is developed on commercial and/or semi-commercial platforms and adopts the conventional, one-way education model based on self-instruction via audiovisual resources, texts, and self-correction tests.

Torres (2013, p. 66) explains that *c*MOOC*s* are structured based on "self-organized learning focused on obtaining meaning through the community experience and using participation tools such as blogs, RSS feeds, and other decentralized methods." xMOOCs are content-focused and available from a sole website that uses automated tools to support activities carried out by a large number of students.

According to the "sMOOC Step by Step" course designers, the current trend requires an educational MOOC design based on the concepts of networking and ubiquitous learning[4]. In that sense, the sMOOC model sought to meet these new demands certainly not because of some fad but instead for the fact that the proposed model was founded on "concepts such as equality, social inclusion, accessibility, quality, diversity, autonomy, and openness." (PROJETO ECO, 2015). The model was heavily steered by education and communication tenets such as:

> 1. The educational design is embedded with the social media style. Mobile and ubiquitous learning technologies take on great relevance because students will be learning in virtual communities, which stirs their motivation and willingness to interact.
>
> 2. Focused on students' learning process. Not only the tasks assigned by teachers but also those suggested by students will be a key element supporting collaboration and dialogue among the virtual communities created in each course.
>
> 3. A sMOOC's success must be measured based on the students' goals, interest, and satisfaction instead on the learning results set by teachers.
>
> 4. Students need a while to adapt to a sMOOC, which they should be able to do within the first MOOC week (PROJETO ECO, 2015).

Regarding the sMOOC model's education- and communication-related characteristics, we find the model's design tend to aggregate social media resources such as blogs, microblogs, group tools, wikis, YouTube, Twitter, Facebook, Google+, and many other web 2.0 available to be adapted and used as educational resources. When used for education purposes, these resources may boost participants' learning. From the standpoint of ubiquitous learning, the use of mobile technologies made provide easier access to information, communication, and knowledge acquisition both in terms of time and space. Unlike the conventional teacher-centered education model, the sMOOC educational design seeks to make sure students are front and center in the learning process so they may play a leading role in their own learning process.

METHODOLOGICAL APPROACH

This paper describes a single case study from a qualitative approach. Data collection followed the participatory observation technique and document review along with source triangulation analysis, According to Robert Yin (2010), a case study "is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (YIN, 2010, p. 39).

[4] [...] technologically speaking, ubiquity may be defined as the ability to communicate everywhere at any time via electronic devices found across the environment. Ideally, such connectivity is maintained regardless of movement or the entity's location. (Souza e Silva, 2006, apud Santaella 2013, pp. 15-16).

We should point out that the document review was conducted based on the information inserted into the "sMOOC Step by Step" course platform because May (2004, p.212) tells us "there are several ways in which researchers might conceptualize a document," including as a reflection of reality, as representative of the practical requirements for which they were constructed, and as media through which social power is expressed. The participatory observations were made on the same platform by two members of the Portuguese language group while the "sMOOC Step by Step" course was going on, in keeping with the argument by Gil (2011) when the author says the observation technique will allow for the highest degree of accuracy in social sciences. We used the triangulation technique to analyze our research findings. It is a common technique in qualitative methodologies because it uses different interpretation techniques which, according to Colás (1993), can be combined to other methods, theories, information, and researchers.

CONTEXTUALIZING THE "SMOOC STEP BY STEP" SCENARIO

The "sMOOC Step by Step" course, first edition, was a collective, multidisciplinary initiative involving the participation of various European higher education institutions. Namely, this training action was organized by Universidad de Cantabria (UC), the University of Manchester (UoMAN), Sünne Eichler (SE), Fundação para o Estudo e Desenvolvimento da Região de Aveiro (FEDRAVE), Sorbonne (SOR), Universidad Loyola Andalucía (LOYOLA), Universidad Nacional de Educación a Distancia (UNED), Portugal's Universidade Aberta (UAb), Politecnico di Milano (POLIMI), Telefónica Learning System (TLS), Universidad de Zaragoza (UNIZAR), Universidad de Oviedo (UniOvi), and Universidad de Valladolid (UVA). These institutions were encouraged to freely participate in Massive Open Online Courses (MOOC) within the European project on the ECO platform created especially for the course as shown in figure 2.

Figure 2: "sMOOC Step by Step" course environment
Source: ECO Project platform (2015).

Given the involvement of and cooperation between the various European institutions, the sMOOC was planned in a multilingual format (Spanish, English, French, Italian, Portuguese, and German), certainly in order to reach different audiences on a global scale. According to the education proposal of "sMOOC Step by Step," it was "a theoretical and practical approach inviting people to think about the role massive online education, particularly sMOOCs, will play in any learning processes in the 21st century" (Projeto ECO, 2015).

The "sMOOC Step by Step" course's study proposal was planned to take place between March and April 2015, with a weekly 15 hours worth of study time, totaling 75 hours in all. However, it is known that study time organization depends on each participant's style and commitment. MOOCs are open, free of charge, non-formal courses. Hence, given these characteristics it is up to each participant to take up an active, responsible stance and set their level of involvement and participation in course activities.

It should be noted that the outlined education proposal was based on an open, flexible perspective, and participants were advised they would need basic computer skills at user level and be interested in the relationship between art, technology, and education.

However, there was a warning the course would be always open and people would be able to access the contents at any time; however, that edition had already ended. Therefore, students could find fewer participants, that is, their numbers might vary as new entrants joined. At first, several groups were set up in the course according to their preferred language regarding participation, as shown in chart 1:

Chart 1: Number of course members per language choice

LANGUAGES	GROUPS	MEMBERS
German	1 Group	8
French	1 Group	40
Italian	1 Group	14
Portuguese	1 Group	44
Spanish	10 Groups	773
English	12 Groups	906
6 Languages	**26 Groups**	**1785 Members**

Source: "sMooc Step by Step" course, adapted by the authors.

The "sMOOC Step by Step" course was organized into five topics, and each topic was assigned a learning goal and different evaluation phases. As outlined in the teaching plans, five learning goals were set for the topics. Chart 2 shows the relationship between the learning goals set and the proposed contents.

Chart 2: Course learning goals and contents

LEARNING GOALS	TOPICS (CONTENTS)
1. Identify the main trends in virtual environment-based education.	1. Welcome and introduction – Why take a sMOOC?
2. Recognize the possibilities offered by sMOOCs as resources for learning in different fields, levels, and contexts.	2. sMOOC ingredients
3. Develop skills to create a sMOOC step by step, according to the following aspects: why; how to do it, how to manage it, how to use technology; how to make it accessible; how to disseminate it, and how to evaluate and use the information.	3. sMOOC management; sMOOC resources and supports
4. Develop sMOOC disseminating skills.	4. Communication and accessibility plan
5. Use technology to hold a sMOOC individually and collaboratively.	5. Evaluating a sMOOC

Source: "sMooc Step by Step" course, adapted by the authors.

The purpose of the introductory first topic called "Welcome and introduction – Why take a sMOOC?" was to explain about sMOOCs and get people acquainted with the platform so that they could familiarize themselves with the virtual platform environment and develop sMOOC management skills as well. In this phase, participants were asked to watch a video, answer a diagnostic questionnaire, and carry out some warm-up activities.

The second topic "sMOOC ingredients" was organized into three sub-topics: "sMOOC: pedagogical characteristics", "sMOOC: actors and roles," and "sMOOC: curriculum elements," and its purpose was to brief participants on the various elements involved in sMOOC. The learning goal set for this phase sought to get participants to recognize the possibilities offered by sMOOCs as resources for learning in different fields, levels, and contexts. The exercise proposed for this phase was for participants to come up with a sMOOC pedagogical design.

The third topic was on sMOOC management. The purpose of this section was for students to focus on the main aspects to consider regarding sMOOC management and the process to be followed, including general design, detailed plans, and sMOOC project presentation. For this topic, participants were asked to freely search the web to look into the universe of other MOOCs and find the similarities they would like to build on the ECO portal. They were also asked to share at least two reference links on the activity-dedicated forum.

The fourth topic, "sMOOC resources and supports" was organized into two subjects: the first was on "Supporting sMOOC participants" and the second was on "What makes a learning resource good for a sMOOC?" Based on these contents, participants were asked to: a) research, share, and evaluate networked open educational resources, then discuss them on the forum; b) look into the concept of OER; c) discuss the results with their peers on the forum, and; d) plan the adaptation of a pre-selected OER for use in a new context. The idea for this phase was to provide students with tools for using open educational resources (OERs).

Regarding the fifth topic, "MOOC communication plan," participants were asked to develop skills for disseminating a sMOOC. In

this phase, participants were asked to identify: "What are my MOOCs' main goals?" and "How can communication strategies help achieve those goals?" For this stage, the activities were related to unique MOOC characteristics; creating social media profiles; sharing on forums and Facebook - peer-to-peer - (P2P).

Finally, the sixth topic "Evaluating a sMOOC" meant for participants to be able to identify the most relevant aspects of sMOOC evaluation. Sub-topics asked participants to consider "What can I evaluate in a sMOOC?," "How do I evaluate a sMOOC?," and "How can I use the information/data in a sMOOC?" In this topic, the activities involved discussing and sharing opinions on the forum; researching and sharing research results using a microblog and/or Pearltrees, Scoop.it, or another tool; presenting specific sMOOC evaluation solutions, and analyzing the satisfaction quiz results.

The proposed evaluation for the activities included in the "sMOOC Step by Step" course comprised different phases along a continuous process in the course of each topic. As presented in the study program, there were evaluation activities regarding each topic before participants moved on to the next one. The activities varied and included reading, video, answering a quiz, preparing individual activities, and peer-to-peer review at the end of each topical unit.

Below we present analyses of data anchored on methodological procedures in line with the opinions of two observers belonging to the Portuguese-speaking group in the "sMOOC Step by Step" course on the ECO platform.

RESEARCH DATA PRESENTATION AND ANALYSES

Considering the descriptive and qualitative perspective and research source triangulation, the course observers and participants found that the activities included in the introductory phase "Welcome and introduction – Why take a sMOOC?" in the "sMOOC Step by Step" environment on the ECO platform were of low complexity, based on the participants experience in online courses. However, as they gradually became aware of the task statements and even though the activities were not difficult to carry out, there was a set of 6 (six) activities that required greater study time organization from observers/participants. Concurrently with the activities, warm-up activities were taking place on the ECO platform to get participants acquainted with the study program, activity statements, and navigating the different spaces: Study Program, Review, Group, Forum, and Progress and Profile Bar. This last one displayed the evaluation system based on the gamification strategy - (Figure 1).

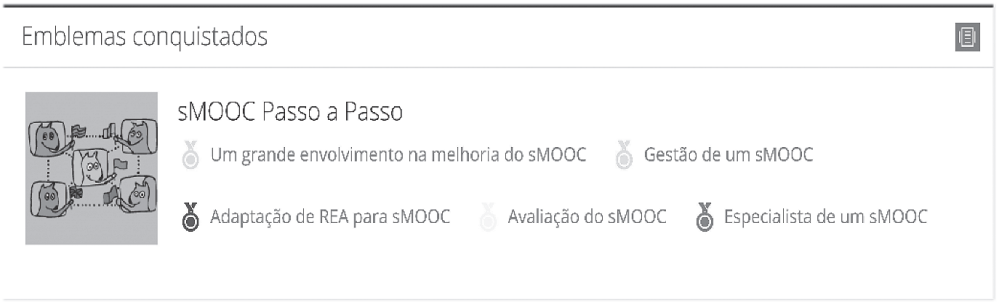

Figure 1: Emblems or Medals
Source: ECO platform - sMOOC Step by Step course (2015).

It should be noted that the topics were systematized for the acquisition of emblems[5] or medals at different levels and sorted as: a) great involvement in sMOOC improvement; b) sMOOC management; c) Adapting OERs to sMOOC; d) Evaluating a sMOOC; e) sMOOC expert. At the end of the training and having acquired medals earned via questionnaires and Facebook activities, in case participants were interested they could pay a fee to obtain a course completion certificate/credentials.

The first topic required participants to watch an introductory video on MOOCs and answer a diagnostic questionnaire. They were also asked to choose a "Learning community group" based on their preferred language, participate in and make presentations on the Discussion Forum, create a profile via the "Gravatar"[6] resource, "Microblog messaging"[7], create a "I follow another person" community, and do the "Facebook Activity (P2P)". Based on the video and diagnostic questionnaire, they were able to grasp the concepts to understand MOOC. Following the proposed program and respective statements, we decided to join the "Learning Community Group – Portuguese Language." Although the platform allowed free access to the other groups, as observers/participants we chose the Portuguese speaking group as this is the observers' native language.

The next task statement, Activity 1, profile update, comprised using the resource to create an avatar account on the Gravatar tool integrated into the Eco platform and installed via plugins, upon which 20 profiles of the 43 members in the Portuguese Language group were updated. In the second "My Profile" activity, participants were asked to insert a "Microblog message" introducing themselves and explaining their expectations for the course. The third activity, "I follow another person," asked participants to read other participants' and teachers' microblog messages and follow those they found more interesting. From this set of activities, we found a strong trend towards setting up interest-based networks. However, out of the 43 members in the Portuguese Language Group, 23 of them were followed and the others were not. Nevertheless, out of those who were followed, 14 became followers, thus helping set up a network.

The last activity in the introductory topic asked for active participation in the social web. According to the task statement, participants were advised to take an active stance so that knowledge could be collectively built. To do that, they were provided with a link via Facebook and another on Twitter. Regarding activities 4 (discussion forum) and 6 (social network), as course participants we found that the activities proposed were not made available to participants by the platform moderator. We found the discussion forum would not open as described in the statement. With respect to Facebook, the link in place reported that "The link you followed may be broken or the page may have been removed." Similarly, there were no message exchanges on Twitter.

Although the course had planned for the inclusion of social tools and asked participants to participate actively, we found a lack of monitoring and execution by the sMOOC management team. We also found that the statements and instructions were succinctly described as topics in bold, which allowed for instructions on each activity to be provided in a clear, straightforward manner easily understood by participants. The set of proposed activities made it possible to identify the essential aspects of MOOC-based training, as well as to think about the concept of MOOC, its different types, and the prospect of MOOCs relative to lifelong training in the 21st century. Furthermore, the mandatory

[5] Symbolic figure

[6] https://pt.gravatar.com/

[7] https://pt.wikipedia.org/wiki/Microblogging

last evaluation phase in Facebook format allowed participants to assess and understand the rubric proposed by the course faculty.

The second topic, "sMOOC ingredients: methodology, pedagogy, and actors", was organized in three sections and encouraged participants to research and share important pedagogical and methodological aspects for developing a sMOOC. The activity allowed participants to share examples of MOOCs and sMOOCs, analyze the research shared by their peers, and help them by strengthening the learning network dynamic through Facebook in the "sMOOC pedagogical design" activity. In this section, we found important points of interplay between the proposed activities through the use of different tools (discussion forum and Facebook). In addition to participants being encouraged to research complementary materials, they were asked to draw up a brief summary and share it with the group via Facebook. We found this strategy would initially help put together the text for the main activity, "sMOOC pedagogical design," and at the same time, share new materials with the other participants, thereby also accomplishing the social task proposed in the sMOOC plan. However, although the course was designed to allow interplay between sMOOC activity and plan, there was no evidence of posting or sharing on the social network. That may be related to the link failure experienced in the introductory phase of the course and which compromised the participants' efforts towards performing the social tasks. As for the second complementary activity in the Discussion Forum, "Welcome to section 2 – sMOOC ingredients," participants were asked to "discuss with the others the most relevant pedagogical aspects of the course you have chosen and other aspects that may be improved," we found seven members participated in this activity, totaling 18 posts. Even though the complementary activities did not directly involve the acquisition of emblems in the unit and at course completion, it should be noted that developing these activities was essential for strengthening the learning group, exchanging experiences, and increased sharing of the contents proposed along the course.

The third topic, "sMOOC management," was organized into three sections and initially encouraged participants to look into other MOOCs and then share their research findings via the discussion forum. Subsequently, they were asked to conduct more in-depth research into a MOOC selected and listed in the forum. The last section was dedicated to Activity 3 "MOOC planning," based on peer-to-peer review. Again, we found significant interplay between the sMOOC educational design and the activities proposed. In a post related to the forum in section 3, the course's pedagogical team equally advised participants to strengthen their learning community by sharing free materials, proposals, and ideas related to the topics in the section via the forum, microblog, or Facebook page. It should be mentioned that the Facebook access link failed, but the other spaces were accessible from the very platform. We should also mention that, throughout the course, reminders were posted advising on the importance of participants' taking part in the different activities proposed and social spaces.

The fourth topic, "sMOOC resources and supports," contained two sections and was meant to encourage participants to research, share, and evaluate open educational resources from the web. Based on participants' assessment, they were immediately asked to select and share the links chosen in the forum with the other participants. They were also recommended to look into and identify the OER concept and then discuss it with the other participants. The discussion points in this topic were: "What makes an educational resource good for a sMOOC? and "Supporting sMOOC participants." This topic led participants to research and share complementary materials, thereby expanding access to different materials available on the platform. Ten participants took

part in these activities and posted 34 messages. After debating, the participants did "Activity 4" via Facebook. In this phase, participants were asked to mock up a plan for adapting a pre-selected OER to be used in a new context. As participants/observers, we found that the proposed activities made it possible to expand and understand open educational resources in the sense that it is possible to provide different sources for them to be used as tools.

The fifth topic in the study plan addressed the Communication and Accessibility Plan in two sections. This topic asked participants to carry out a sequence of five activities supporting the development of the sMOOC communication plan. The first activity was designed to make participants think about the MOOC's unique aspects in order to define the communication plan. Next, they were told to look into other MOOCs to find examples of good practices for developing the communication plan. The third proposed activity involved creating a profile on social media to simulate a practice proposal that showed the actual relevance of the (hypothetical) proposal being put together. Subsequently, participants were asked to share and discuss the phases involved in creating a MOOC community. As a result of this process, the last activity – equally done via Facebook, asked them to draw up a communication plan. It should be noted that in this section, once again, the topic was not opened by the pedagogical team moderator. Hence, the learning network could not be strengthened as the interaction between participants was discontinued. Except for this incident, we found the activities proposed in this phase to be consistent as an important element to support the design of the communication plan. At the same time, they corresponded to the learning goal meant to "develop skills for disseminating a sMOOC." Like in previous topics, this topic's statements were clearly and straightforwardly worded, albeit somewhat lacking in terms of details. On the one hand, summarized information is more to-the-point. On the other, the lack of details may create gaps and raise questions.

The last topic, "Evaluating a sMOOC," was organized in four sections and meant to develop the most relevant aspects for evaluating a sMOOC. It also encouraged participants to put their new knowledge to use by coming up with suggestions for an evaluation rubric in the very sMOOC. The answers to the questions: "What can I do? How can I evaluate? How do I use the information/data in a sMOOC?," made it possible to systematize a sequence of five activities supported by the research into MOOC evaluation papers. Next, participants were asked to share via Pearltrees or Scoop.it, post to the microblog, and hold peer-to-peer discussions via the Discussion Forum. Finally, the Facebook activity had them write an essay discussing the different phases and mishaps to which the evaluation aspects are susceptible, as well as how to manage a sMOOC plan's solutions and results. Finally, for participants to earn the last medal and certification, the study program required them to answer a satisfaction questionnaire. We found that in this phase the Facebook exercise allowed participants to actually experience and think about the sMOOC evaluation system.

From the analyzed data on the "sMOOC Step by Step" course platform, we found that 7 (seven) members earned 5 emblems, 1 (one) member earned 4 emblems, 1 (one) member earned 3 emblems, and 3 (three) members earned 1 (one) emblem. However, 31 out of the 43 members in the Portuguese language group earned no emblems. It should be noted that, in order to obtain emblems or medals, accreditation, or a course certificate, participants were required to do the Facebook activity. However, the data indicated the emblems were neither appealing nor compelling enough for participants to do the activities and remain in the "sMOOC Step by Step." Table 1 shows the frequencies for the 43 Portuguese Language Group members signed up to "sMOOC Step by Step" (Forum and microblog posting, networking, and course completion):

Table 1: sMOOC Step by Step Portuguese Language Group participation frequency

FREQUENCY	Nº. PUBLICATIONS (POSTS)		OBTAINED FOLLOWERS		FOLLOWED OTHER MEMBERS	
≥ 10	3	7%	0	0%	3	7%
≥ 05	5	12%	12	28%	7	16%
≤ 04	10	23%	11	26%	4	9%
No frequency	25	58%	20	47%	29	68%
COMPLETED THE COURSE			DROPPED OUT			
8 Members	19%		35 Members		81%	

Source: prepared by the authors

Table 1 shows that 7% of members in the Portuguese Language group posted ten or more messages, 12% five to nine messages, and 23% one to four messages. However, 58% of members failed to post or interact on the forums and/or microblog. We see that 54% of members were followed by other group members. However, that did not ensure reciprocity between other members for the collaborative network to be set up – i.e. obtained followers and followed other members.

In the "followed other members" category, we found that only 32% of members followed other group participants. We can see the more "active" ones had no impact in terms of setting up a collaborative network – understood here as cooperative because activities were done individually as opposed to jointly. Notably, their posts did not spur dialogue among participants. Instead, the environment turned into some activity storage unit. It should be noted the forum moderator's first post instructed participants to create a learning community using the "GROUPS" tool. To use this tool, participants should join a group based on the language criterion. Upon joining, they were advised to participate in the sMOOC in such a way as to strengthen the collaborative environment. Nonetheless, we found a low frequency of forum posting by participants: a) 36 posts were made to the "Welcome to sMOOC" forum; b) 18 posts were made to the "sMOOC ingredients" forum; c) 37 posts were made to the "sMOOC management" forum; d) 7 posts were made to the "Evaluating a sMOOC" forum; and e) 8 posts were made to the "What can I evaluate in a sMOOC?" forum.

On these forums, participants were supposed to delve into open educational resources on the internet, share, and collaboratively participate in the activities and social spaces (hangout, forum, microblog, and Facebook). We found that the more active forum participants shared but did not encourage the debate with other participants. We believe that such behavior, added to the lack of posting by the "Communication and Accessibility Plan" forum moderator, had an impact on participation that consequently led to a high dropout rate in "sMOOC Step by Step," first edition 2015.

Furthermore, evaluation activities were carried out on a peer-to-peer basis (participants) on a scale from 1 to 5, where the final score resulted from the evaluators' average score. At this point, we found that a participant's evaluation was viewed only after the evaluation by at least another two course participants. In case the number of evaluators (peers) was insufficient, there was no information about the possibility the moderator might do the evaluation him/herself, neither was there any arbitration to handle possible complaints in case of peer review discrepancies.

FINAL CONSIDERATIONS

This paper looked into "sMOOC Step by Step," first edition 2015, and was put together as a descriptive case study using a qualitative approach. Evidence was collected via participatory observation, document review, and source analyses in order to determine whether "MOOCs meet the lifelong training needs of people in the 21st century." By analyzing the evidence, we found that the model put together for sMOOC Step by Step, first edition 2015, was flexible and compatible with modern lifestyle needs because of its design especially oriented to learning. The course provided different resources (discussion forums, groups, microblogging, and social media such as Facebook and Twitter), in addition to various materials allowing teachers to develop skills in line with their 21st century needs. The evidence allows us to believe that "sMOOC Step by Step," first edition 2015, provided a broader view of the scenario related to learning situations in a time-efficient manner and at an affordable cost for teachers. Therefore, it can be used to meet the lifelong training needs of people in the 21st century.

Given the networked society's requirements and lifelong training needs, the European Union-financially backed ECO Project's "sMOOC Step by Step" was designed to support massive open online courses dedicated to training European teachers on how to create their own courses and positively impact other education communities as well.

On the ECO Project platform, "sMOOC Step by Step" was devised based on the MOOC pedagogical model to get people thinking about how massive open online education, particularly sMOOCs, may be put to use in various learning scenarios in the 21st century, unlike the conventional models usually centered on content dispensing and reproduction. sMOOC design is based on networking, ubiquitous learning, open educational resources, and gamification elements. This model is different from a one-way model, such as xMOOC, for example, and transcends the idea that using MOOCs in continuing education courses is a mere fad.

However, we found there was a strong appeal for networked collaboration dedicated to the acquisition of the skills necessary for presenting one's own education-related ideas in line with the groups set up according to the six languages offered (German, French, Italian, Portuguese, Spanish, and English), with respect to the course development concept from the standpoint of a sMOOC. At this point, we direct your attention to the collaborative network-based training model meant to be set up through a sMOOC. From the course studied in this paper, we found that participants' contributions were limited to completing activities using some niches as mere repositories. In other words, they disregarded the appeal for collaborative participation. In some cases, participants were strictly cooperative, and there was little interaction among course mediators and members.

Careful planning and monitoring are paramount when it comes to training via collaborative learning networks so that higher interaction frequencies may be achieved, thereby resulting in a participatory culture among sMOOC participants. That is justified by the strong social media-style networking appeal focused on sMOOC participants' learning process towards collaboration and dialogue between virtual communities.

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