PLANNING TO DESIGN MOOC? THINK FIRST!

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Abstract: Over the last years, educators have been forced to rethink about the whole education system. In 2005, Connectivism, a new learning theory, was emerged. Consequently, Massive Open Online Courses (MOOCs) have been presented as an alternative powerful educational system. Money was invested and tens of for-profit and non-profit companies involved in producing MOOC. However, integrating and adopting MOOC in educational institutions worldwide is still questionable. This literature review paper addressed and discussed the issues that higher education institutions should consider before adopting MOOC. The findings showed eight considerable, interrelated and controllable MOOC issues: high dropout rate, accreditation, business model, reputation, pedagogy, research ethics, student assessment and language barrier. Policy makers in higher education institutions should be aware of these issues before including MOOC in their development plans. In addition, the paper presented a number of possible future studies.

INTRODUCTION

Humanity lives today what some people call a knowledge explosion. What was considered to be robust knowledge yesterday, is in doubt today, and may disappear tomorrow. The cycle of emerging, discussing, adopting, questioning, and disappearing of knowledge not only continues but also accelerates. As AlDahdouh, Osório and Caires (2015) say, "The time should be considered as a dimension of knowledge" (p. 12). Such observation has encouraged Arbesman (2012) to study the half-life of facts, having concluded that the half-life of knowledge is shorter than ever. That also has motivated Siemens (2006) to discuss soft knowledge, the freedom of knowledge, and eventually introduce Connectivism as a new learning theory. According to Siemens (2006), earlier learning theories are no longer able to interpret learning activities of learners in the digital age. Connectivism, on the other hand, interprets learning occurring outside the learners and describes networked learning. In Connectivism, "the structure of the knowledge is described as a network... Learning, according to Connectivism, is a continuous process of network exploration and patterns finding; it is a process of patterns' recognition" (AlDahdouh et al., 2015, p. 14). In 2008, George Siemens, Stephen Downes and Dave Cormier developed a concept for a course portraying the connectivism (Downes, 2012, p. 536). The first course was Connectivism and Connective Knowledge (CCK08) offered by Siemens and Downes (Downes, 2008). The course succeeded to attract 2200 students worldwide (Downes, 2008). It has since become known as Massive Open Online Course (MOOC) (Jacoby, 2014; Weller, Siemens & Cormier, 2012). The idea of MOOC found allies among other academic institutions and rapidly became a potential solution in the context of educational reforms. In 2011, more than 160,000 students enrolled in an online Artificial Intelligence course offered by Stanford University (Jacoby, 2014; Pérez-pena, 2012). The course launched the second phase of MOOC development. Several companies have been built to support MOOC development. Eventually, learning shifted from universities to companies. Udacity, Coursera, and edX are some of those leaders of MOOC providers. MOOC in this phase is somehow different from the original one. Some researchers present it as xMOOC to be distinguished from connectivist MOOC, cMOOC (Daradoumis, Bassi, Xhafa & Caballé , 2013; Downes, 2013).

While evolving, MOOC has been criticized by many educators and researchers (Auyeung, 2015; Bartolomé & Steffens; 2015). High dropout rate, accreditation, and business model are some of the most discussed issues. In addition, there are other sensitive issues such as MOOC reputation, research ethics, pedagogy, assessment, language barrier, and impersonation-and-fraud. Considering these issues, higher education institutions have developed different stances toward adopting MOOC: some are producing MOOCs (producers), some are using MOOCs developed by others (consumers), some are waiting to see the results, and others decided against any form of official adoption (Hollands & Tirthali, 2014b, p. 49). Among the list of those who decided not to participate are some of Europe's best schools: Oxford and Cambridge (Auyeung, 2015). Moreover, in a report of 2014 that tracks the online education in the United States, 39.9% of American higher education institutions have not decided whether to adopt MOOC or not (Allen & Seaman, 2014). And this proportion seems to be larger for

other countries (Jacoby, 2014), while little has been done to address the issues of MOOC and clarify their impacts (Auyeung, 2015).

This paper may serve those academic institutions to identify MOOC issues when seeking to use MOOC in their development plans. The paper addresses these issues, clarifies and presents the recent developments in each issue.

MOOC

As previously mentioned MOOC stands for Massive Open Online Course(s). Therefore, MOOC is an online course with two additional features: openness and massiveness. Openness is one of the core concepts of Connectivism. As Downes (2012) said, "The topic of 'openness' in education was sufficiently large as to require a separate work" (p. 11). In general sense, openness in Connectivism means a freedom of participation and engagement; a transparency of content and design; and a freedom of learners to teach and learn (Jacoby, 2014; Downes, 2012; Weller et al, 2012). From learners' perspective, the course is entirely accessible with no constraints. No tuition fees, no identification and no previous conditions or certifications are required to enrol into the course. Thus, the course may have a heterogeneous spectrum of students with different backgrounds, languages, ages, and cultures. Massiveness refers to the possibility to scale up the course in terms of the number of students (Weller et al, 2012). It can be seen that the massiveness is the result of presenting a course with no constraints in a networked environment. Consequently, it is normal to see a single MOOC with a number of students exceeding the entire number of students enrolled in some universities (Markoff, 2011). One important feature which is not clearly stated in the MOOC title, although it is implicitly included in openness keyword, is participation. In fact, participation is the key feature of MOOC which distinguishes it from Open Courseware (OCW) and Open Educational Resources (OER) (Littlejohn, 2013). MOOC is not just content presented online for free; it is a matter of actions, connections, and activities. Connections and activities of the learners themselves are what Connectivism is all about. Learning occurs while connecting nodes; "The pipe is more important than the content within the pipe; simply because the content changes rapidly" (Siemens, 2006, p. 32).

Hereby, MOOC can be defined as a course aiming a large-scale interactive participation and open access via Web (Littlejohn, 2013).

METHODOLOGY

This study employed a qualitative content analysis approach. In qualitative content analysis, researchers start with purposefully selected and relatively small content samples, looking for deep meaning, themes and patterns of connections. Then, during data analysis, the researchers immerse themselves in data and allow themes to emerge (Zhang & Wildemuth, 2009). The aim of the current study is to find as many considerable issues as possible. Therefore, the study investigated other participants' and researchers' feedbacks on MOOC. It is important to know that researchers in Connectivism depend heavily on openness of information and use blogs, social networking websites and YouTube to share their research results (Jacoby, 2014), which are not the regular scholarly publication channels. In addition, MOOC is a fast growing phenomenon (Bali, 2014; Jacoby, 2014); for example, in late December 2015 a Google Scholar showed 978 articles when searching for 'MOOC' term in the title (excluding 'citations' and non-English language results) in contrast the search results showed 200 articles in early October 2013 (Jacoby, 2014). This added a difficulty to the current research.

The study passed through two phases. The first phase started by investigating Connectivism theory and then searching for MOOC. The main purpose in this phase was to understand Connectivism and MOOC, identify MOOC types, and detect MOOC issues. Abstract and conclusion sections in research reports, blogs and journal articles were the main target. In some cases, the whole text was read in order to reach a full understanding of the issue presented in the article. The keywords used in search engines and digital libraries were George Siemens, Connectivism, MOOC, Massive Open Online Courses, and MOOC issues. By the end of the first phase, Connectivism theory, MOOC concept, types, and a list of MOOC issues were organized. Understanding of Connectivism was presented in other work (Aldahdouh's et al., 2015). The second phase began by searching for the issues one by one. The keywords used in this stage were closely related to the issue name and its synonyms. The results were filtered to the last seven years and then filtered upon relevance to the topic. Abstracts, discussions, results, and conclusions were the main target, while the whole text was read in some cases. The main purpose in this phase was to identify the issue, understand it, and see the latest developments in the field. By the end of this phase, all issues were detected and clarified.

ADOPTION MODELS

MOOC issues can't be addressed without identifying the adoption models of MOOC because those models depend on different theoretical frameworks and therefore have different interpretations of the same issue. Many

adoption models were identified while only three can be considered as influential models: cMOOC, xMOOC and SPOC:

cMOOC

cMOOC stands for Connectivist Massive Open Online Course(s). This is the model that was initially suggested by Downes and Siemens (Downes, 2008). The course structure depends on Connectivism principles as a guide for its pedagogy. In this structure, two kinds of students' participation are presented: (1) in-classroom participants - those who are paying and registering in the traditional educational system and taking the course as part of accredited degree; (2) online participants - those learners who are taking the course searching for knowledge without accredited degree. From in-classroom students' perspective, this structure may be seen somehow like blended learning rather than online/distance learning.

In this structure, the university initiates the course as any traditional course. A teacher handles the course schedule, builds a virtual course environment, in a Wiki page or in a Learning Management System (LMS), and invites students from all over the world to participate. In-classroom students normally register in the course at the university as part of an accredited degree, and participate in the online course. Online participants, who probably were searching for such courses over the Internet, accept the invitation and participate in the online course without credit at the end. While a Wiki page or LMS represents the common node for all learners, most of the learners' learning activities happen outside it (Saadatmand & Kumpulainen, 2014; Downes, 2012). Each learner has a Personal Learning Environment (PLE), which consists of a subset of available Web 2.0 technologies such as Facebook, Twitter, blogs, wikis, RSS, etc. Learners are encouraged to use their own tools to post and comment on the course and to collaborate with others but with a common tag. To keep themselves aware of other students' activities, the aggregator (a tool that gathers students' activities) sends a daily newsletter to each student. In each week, a course author raises a topic for discussion. The learners regulate their activities and interact with other learners, sometimes in smaller sub-networks. Thus, the content is distributed and built upon participation (Downes, 2012; Masters, 2011).

Hereby, cMOOC is defined as "an online course with the option of free and open registration, a publicly-shared curriculum, and open-ended outcomes. MOOCs integrate social networking, accessible online resources, and are facilitated by leading practitioners in the field of study" (McAuley, 2010, p. 10). Some examples of courses carried out on this model are: CCK08, PLENK2010, MobiMOOC, EduMOOC, Change11, DS106 and LAK12 (see Rodriguez, 2012). Although it does not identify itself as cMOOC platform, Peer 2 Peer University (P2PU) may participate in creating cMOOC environment (Cole & Timmerman, 2015, p. 190) where it "allows any member to design and create an educational course, which can then be taken by any other member in the online community" (Ahn, Butler, Alam & Webster, 2013, p. 3).

xMOOC

xMOOC stands for eXtension of other educational stuff as MOOC. Course structure depends on online/distance learning model rather than on blended learning. Only online participants are presented in xMOOC. xMOOC follows instructivist course design in which learning goals are predefined by instructor (Littlejohn, 2013). Rodriguez (2013, 2012) argues that xMOOC relies on cognitive-behaviorist pedagogical practices while Conole (2013) argues it mainly adopts a behaviorist learning approach. This model got a lot of criticisms from the connectivists (Parr, 2013).

In this structure, an online platform is built by company which is called MOOC provider. The platform presents a set of discrete courses. Each course is offered by one or more instructors or academic institutions. The course content consists mainly of short movies, links to related resources, short quizzes, multiple-choice questions, projects, and discussion forums (Bali, 2014). Depending on the subject, some courses may have auxiliary applications such as in-browser programming environments and simulation programs (Ben-Ari, 2011). The assessment of student's progress mainly depends on the AutoGrader system with limited peer evaluation. Although the learners can participate in discussion forum or external sub-networks (a group in Twitter for example) (Bali, 2014), the course is still centralized on the MOOC provider where the teacher *teaches* and the learner *learns*. Moreover, the definition of openness is constrained in xMOOC (Rodriguez, 2013). For instance, some MOOC providers impose additional fees to use the material presented in their courses by other academic institutions (Hollands & Tirthali, 2014a; 2014b).

Some examples of MOOC providers are: edX, Coursera, Udacity and FutureLearn (Downes, 2013; Auyeung, 2015). Each MOOC provider presents hundreds of courses, for example Aerodynamics XSeries (offered by Massachusetts Institute of Technology on edX) and Python for Everybody (offered by University of Michigan on Coursera).

SPOC

SPOC stands for Small Private Online Course. Fox (2013) presents a new model to adopt xMOOC. In this model xMOOC is used as a supplement to classroom teaching rather than being viewed as a replacement for it. Thus, SPOC is residing under the blended learning umbrella. SPOC consists of two or more detached courses, one which is running at the traditional academic institution and the others running on xMOOC. The courses' titles may be similar, but each one may have different instructors, students, and content.

In this model, the traditional university initiates the course. Teacher sets the course goals and reviews xMOOC providers to find out other similar courses. When the on-campus course begins, a teacher invites the students to join similar courses running on xMOOC. In-classroom students learn the basics concepts, interact with international online students and solve the quizzes on xMOOC, while spending more time working on the lab and solving real problems in classroom time. Fisher and Fox (2013) suggest a wrapper-MOOC structure which is similar to SPOC but where on-campus courses are 'synchronized' with xMOOC and the xMOOC's requirements should be a subset of the campus course. Some researchers (Auyeung, 2015) reported, based on BBC News article, that SPOC means imposing a restriction on the number of participants in xMOOC. However, we didn't see this claim congruent with Fox's SPOC model.

MOOC ISSUES

There are eight considerable issues of MOOC. Some issues are significant for one model but not for the others. Therefore, it is important to address these issues, figure out where they apply, discuss, understand and solve them, so we can move on.

High Dropout Rate.

Dropout rate refers to the ratio of students failing to complete the course, to the total number of enrolled students. Dropout rate is sometimes referred as attrition rate or by its complement ratio, the completion rate. Dropout rate is a point of concern of online education in general, not just in MOOC (Allen & Seaman, 2014). In MOOC, however, the dropout rate is extremely high. While thousands enrolled into MOOC, hundreds – or, sometimes, tens - show up at the end of the course. Jordan (2013), who gathered unofficial completion rates of many MOOCs, reported that most MOOCs have completion rates of less than 13%. Even worse than that, Kolowich (2013) stated that the completion rate in MOOCs is believed to be around 10%. In a recent report of 64 certificate-granting courses offered by Harvard and Massachusetts Institute of Technology (MIT) on edX platform, the certification rate increases slightly from 7% to 8% (Ho et al., 2015). This issue has a great impact on all MOOC types, but it is critical for xMOOC, since online students are the only students they have. The issue is widely mentioned and discussed among researchers (Auyeung, 2015; Cole & Timmerman, 2015; Bali, 2014; Kolowich, 2013; Ahn et al., 2013). Coursera co-founders, Daphne Koller and Andrew Ng said that "most students who register for a MOOC have no intention of completing the course, their intent is to explore, find out something about the content, and move on to something else" (Kolowich, 2013). However, the data shows that the percentage of explorers, who access half or more of course chapters presented on edX, forms only 14% to 19% of the total participants (Ho et al., 2015, p. 8). Yang et al. (2013) explored students dropout behavior in xMOOC ran on Coursera. They ended up with a survival model of three predicators: (1) Authority - students with a good authority scores are those who engage other students in discussions; (2) Cohort 1 - a set of students who began work within the first week; (3) Post Duration - the time difference between the first post and last post in selected week. Thus, students who linked to these predicators are the most likely to complete the course. Deeper analysis on edX platform shows that completion rate is higher among those who pay for certificates which makes the researchers (Ho et al., 2015) asking:"Should payment be mandatory" (p. 31)? They, however, recognize that this would compromise the core principle of the MOOC of being open access. Further research may be required to find out the factors and procedures that MOOC provider should take to foster student engagement. In cMOOC context, connectivists developed a new philosophy of success and completing the course; success is simply defined as when the learners complete what they defined for themselves as goals for participating in the course (Jacoby, 2014; Weller et al., 2012). Therefore, the high dropout rate is not seen as an issue in cMOOC. However, some researchers in cMOOC (Milligan et al., 2013) studied the pattern of learners' engagement in cMOOC and identified passive participant, who does not complete the course and develops frustration and dissatisfaction with the course, as an issue.

MOOC Accreditation.

MOOC Accreditation refers to the process of giving an online-MOOC student credit or recognition upon completing the course requirements. In general, the online students who are enrolling, studying, and successfully completing MOOC requirements get nothing but a letter of completion (Bergeron & Klinsky, 2013). Although some MOOC providers offer handful courses with verified certificates (Ho et al., 2015; Cole & Timmerman, 2015), more clarification is needed. Accreditation is a complicated process. Bergeron and Klinsky (2013) highlighted the complexity of MOOC accreditation. In traditional education, the student is granted a credit upon

successfully completing a degree. The degree, not a single course, is accredited by the academic institution. The academic institution itself is accredited by an accreditation agency. In most countries, the official accreditation agency is the Ministry of Education. In MOOC, the accreditation is quite different. The online student registers into a single course. There is no study plan of a degree to follow, although some MOOC providers start offering series of related courses. Therefore, the accreditation needs to be done upon a course, not a degree. Also, if the student successfully finished a group of selected and interrelated MOOCs, wouldn't (s)/he deserve to have a certified degree? Moreover, even if a student granted an accreditation on a course/degree, is it possible to consider this course/degree to continue in traditional education and vice versa? These and many other questions should be answered for MOOC accreditation. Auyeung (2015) claims that MOOC providers fail in the process of accreditation. From on-campus students' perspective, accreditation seems to be one of their concerns regarding MOOC (Cole & Timmerman, 2015). This is also shown in edX courses where 57% of participants reported their intent to earn a certificate (Ho et al., 2015). In cMOOC context, it is clear that formal accreditation is not in their agenda where participants are expected to be searching for knowledge, not certificate, and the educators volunteer their time and interact with participants (Rodriguez, 2013; McAuley et al., 2010).

MOOC Business Model.
MOOC Business Model is sometimes referred as Money Model (Dellarocas & Van Alstyne, 2013) or MOOC sustainability (Sangrà & Wheeler, 2013, p. 290; Yuan & Powell, 2013). MOOC business model concerns about building a successful functional and financial design of MOOC. In xMOOC context, to understand MOOC business model, the reader should be aware of the key players in the model which are (1) the students, (2) the MOOC provider who builds and encapsulates the online infrastructure of the MOOC, and (3) the MOOC partners who are interested in providing the course for the public, usually academic institutions, museums and governments. From learners' perspective, MOOC is free, except if they want to have a credit, but from the MOOC provider's perspective, it is really costly. It includes: (1) installation cost such as building course materials, creating videos, creating online quizzes and, in some cases, creating programming or simulating environments; and (2) running cost such as tech-support and hardware infrastructure maintenance. Developing high quality courses with interactive features may cost between $39,000 and $325,000 per course (Hollands & Tirthali, 2014a; 2014b). As usual, someone should pay the bill. Although some researchers (Cole & Timmerman, 2015) have fears that MOOC will serve only a handful universities and private companies to generate many at expense of other academic institutions, Yuan and Powell (2013) report that "it is not entirely clear how the MOOC approach to online education will make money" (p. 10). In addition, the proportion of US academic leaders who do not believe that MOOCs are sustainable is almost doubled in two years (from 26.2% in 2012 to 50.8% in 2014) (Allen & Seaman, 2014). Dellarocas and Van Alstyne (2013) studied the proposed money model for MOOC. They argued that the current Open Source Money Models can be implemented for MOOC. In these Models, there are two main tracks:

- Charge for complements: Red Hat Linux offers Linux software for free and charges for consulting and technical support. From a MOOC's perspective, teaching a man how to fish allows us to sell him a boat. We can also sell the fish he caught while learning.

- Charge a different group with interdependent demand. LinkedIn offers many free services to job seekers and charges recruiters. Teaching a man how to fish, we can charge fleet captains who hire him.

Most of MOOC providers charge fees for verified certificate which may be considered their main source of revenue (Yuan & Powell, 2013). For example, edX charges fees for certificate ranges from $25 to $250 where most fees are $100 or less (Ho et al., 2015). Some xMOOC providers impose fees for using their materials from other academic institutions (Bartolomé & Steffens, 2015; Hollands & Tirthali, 2014a; 2014b). Re-run the course will certainly reduce the cost (38% lower in cMOOC and even lower in xMOOC) (Hollands & Tirthali, 2014b). However, MOOC sustainability is still a critical issue for both xMOOC and cMOOC. Ultimately, sponsors' and supporters' funds will run out. Open Source Money Models are options, but more investigation may be needed to find out the best combination.

MOOC Reputation
MOOC reputation refers to the beliefs or opinions that are generally held about MOOC. It is well known that a successful MOOC depends to a large extent on active participation (Bali, 2014; Saadatmand & Kumpulainen, 2014; Milligan et al., 2013). Participation, in turn, depends mainly on academics' and students' beliefs and their opinions toward MOOC. In a study using Twitter posts examining the public opinions of Open Educational Resources (OER) and MOOC (Abeywardena, 2014), MOOC gains more interest over OER. However, the average positive public opinion of MOOC is still around 25%. MOOC reputation issue is not new; it is inherited from online learning. During 2008-2009, a survey (Seaman, 2009) was conducted to examine academics' attitudes and beliefs toward online learning. About 10,700 faculty staff from 69 colleges and universities in the USA participated. The results show a paradox among the faculty views; the majority has serious reservations about the quality of online learning outcomes and in the same time they recommend online courses to students!

In 2014 report, Allen and Seaman show that "a continuing failure of online education has been its inability to convince its most important audience – higher education faculty members – of its worth" (p. 21). Since and over ten years, the rate of US academic leaders who say that their faculty accept the value and legitimacy of online education is fluctuating where it nearly returned to where it started, 27.6% in 2003 and 28% in 2014 (Allen & Seaman, 2014). Interestingly, the data from different MOOC providers show that a considerable portion of MOOC participants is adults (Pope, 2015; Macleod et al., 2015; Ho et al., 2015). For example, in six courses offered by University of Edinburgh on Coursera, 70% of participants are well-educated and in employment (Macleod et al., 2015). Moreover, in edX platform, 39% of the participants are identified as a past or present teacher (Ho et al., 2015). This suggests that MOOC is for teaching teachers, not for teaching college students (Pope, 2015). This also implies that faculty members have paradoxical opinions toward MOOC, since they are using MOOC to learn for themselves, but not to teach their students. From college students' perspective, MOOCs are seen useful for lifelong learning but are inferior to traditional college courses (Cole & Timmerman, 2015). Although the paradox in faculty and student attitudes toward MOOC may suggest an opportunity to change their opinions, their current opinions are largely negative and must be resolved before online learning is widely accepted. Further research may still be needed to track the change of their perceptions over time.

MOOC Research Ethics

Research ethics refer to principles of protecting research participants from direct or indirect harm that a research intervention might cause (Esposito, 2012). The research ethics concept, therefore, resides in between ethics and legal regulations. On one hand, it depends on philosophical definition of identity, ownership, rights-and-duties, and public-and-private. On the other hand, it depends on regulations, which should be strict and sharp. Research ethics has always been a controversial issue, but Internet emergence made it complicated (Marshall, 2014). On the Internet environment, the distinction between public and private is foggy and identity is sometimes misleading. Furthermore, social networking sites and MOOC make a disclosure of social activity feasible. For example, Facebook social network stores users' typing in posts or comments, even if they are never published. They called it self-censorship. This information has been disclosed and used as research material (Das & Kramer, 2013). From xMOOC's perspective, using student profiles and using their accomplishments are among ethical questions that need to be answered according to the research ethics. Marshall (2014) refers to some MOOC's ethical concerns; for example, the academic institutions should avoid harming students and wasting their times by offering trivial academic experiences. Nash (2015) adds grade inflation under the same issue in where students get A's easily and therefore they gain a false sense of their achievement. While Hollands and Tirthali (2014a) show that 41% of institutions are offering MOOC for marketing and maintaining their brand; and they succeeded in receiving media attention. These institutions succeeded in their goals in which student care is not included. Bali (2014) already experienced one of those poor courses that "neither intentionally develops higher order thinking, nor promotes student interaction" (p. 52), makes her wondering how such prestigious institution offers like this course. Tension and even rudeness among students in discussion forums (Bali, 2014) in the absence of teacher's care (Marshall, 2014; Churchill, 2014) is another example of MOOC ethical issues. In cMOOC context, Marshall (2014) argues that cMOOCs offer more ethical approach by disrupting the power relationships between teachers and learners; where teachers, researchers, students are all learners (Aldahdouh et al., 2015). In general, research ethics studies in MOOC are scarce (Marshall, 2014; Churchill, 2014) and more should be done to clarify the best practices in MOOC context.

MOOC Pedagogy

MOOC pedagogy refers to teaching and learning practices in MOOC. MOOC types are different in their pedagogy. cMOOC follows connectivist practices of student participation and self-orientation where it seems that the pedagogical practices follow more specifically Downes' (2010) four principles: autonomy, diversity, openness and interactivity. The knowledge is hectic, networked, and complex; "it is a jellied creature" (AlDahdouh et al., 2015, p. 15). It is built upon students' activities (Siemens, 2006). xMOOC follows instructional practices, where the materials are designed and prepared in advance. The students watch series of video (lectures), read recommended articles, and solve quizzes (Bali, 2014). From students' perspective, Ben-Ari (2011) reported he is completely disappointed due to the absence of pedagogical innovation in xMOOC. "I see no pedagogical difference between these courses and the programming course I taught as a teaching assistant over 30 years ago" (p. 60), he said. Bali (2014) participated in four different xMOOCs presented on Coursera platform and found significant differences in their pedagogical practices; while some develop higher order thinking, others depend merely on recall quizzes. Yet some researchers (Glance et al., 2013) reported that there is no reason to believe that MOOC are any less effective as a learning experience than their face–to–face counterparts. But the fact is that the high dropout rate in xMOOC could be, in one way or another, due to its pedagogical practices. Romero and Usart (2013) suggested integrating the use of serious games as a key part of the methodology for teaching and learning. In cMOOC context, Saadatmand and Kumpulainen (2014), tracked participants who attended at least one cMOOC and found that a great majority "believed the cMOOC environment helped enhance student autonomy and improve self-directed learning by defining their learning

goals and organizing learning activities and interactions" (p. 22). However, the researchers acknowledged that autonomy and self-regulation were overwhelming experience for some other learners who adopted lurking and peripheral participation. Milligan et al (2013) further distinguished between lurkers and passive participants where although they both did not participate in the course, passive participants developed dissatisfaction with the course and most probably did not get benefit from it. Of course, more research may still be needed to enhance MOOC pedagogical practices.

MOOC's Student Assessment
Student assessment refers to the continuous process in which we get evidence if students met course goals and expectations in order to improve their learning. The assessment process in MOOC depends on two things: MOOC types and whether the course is offered for credit. In cMOOC, there is no rigid assessment process as it known in conventional institutions (Levy, 2011). Success and failure definitions are left for the learners who suppose to set their goals and test whether they were met after the course. However, learners are encouraged to evaluate their progress and understanding through interaction with other learners. In xMOOC, the assessment follows the instructional practices. The course has many quizzes and projects. AutoGrader systems are the main technique used to assess student's performance in conjunction with a limited peer-assessment (Bali, 2014; Ben-Ari, 2011). Although most xMOOCs are similar in the techniques used for assessments, Bali (2014) argues that they are different in the level of thinking they measure according to Bloom's Taxonomy and no generalization can represent their diversity. It is understandable how difficult it is to assess thousands of students enrolled in one course using traditional assessment techniques (Nash, 2015). At the same time, the current techniques may work fine if the online student won't get a credit, but if the course offered for credit, these techniques may not work. After all, the institutions that accredit the course need to have an evidence of students' learning. The evidence should take care of fraud and impersonation problems related to online environments. Some efforts have already been done to limit fraud and impersonation, like using face recognition and writing pattern to uniquely identify the participant. Further researches on this area are appreciated.

Language Barrier
The language barrier can be seen from two sides: from the student side and from the MOOC partner side. From the student side, language may limit the participation chances to the MOOCs available in his/her spoken language. For those who can communicate in English, this may not be a problem, but for others who can't, it indeed does.

Table 1: xMOOCs offered by Coursera platform categorized by different subject areas and languages.

Catalog	English	Arabic	Portuguese
Arts and Humanities	178	0	2
Business	292	0	6
Computer Science	224	0	9
Data Science	150	0	1
Life Sciences	208	0	0
Math and Logic	42	0	1
Personal Development	52	0	2
Physical Science and Engineering	161	2	1
Social Sciences	280	0	5
Total	1587	2	27

In the time of writing this paper, Coursera offers 1587 MOOCs in English in comparison to 2 and 27 MOOCs in Arabic and Portuguese respectively. In addition, when some non-native speakers try to take courses in English, they prefer to use transcripts and presentation slides instead of listening to lectures (Bali, 2014), which is also a sign of difficulty.

From the MOOC partner's perspective, the language barrier is also critical. If the university offers MOOC in Konkani language for instance, which is spoken by a very limited people around the world, the course may not be massive at all. In the process of solving the language barrier, some MOOC providers start using subtitles for different languages (see Coursera for example). Another solution is to develop local platforms that support other languages. For example, Saudi Arabia established its own platform Rwaq and Jordon established Edraak in which they support Arabic language (Macleod et al., 2015).

DISCUSSION
This paper was drove by the researchers' doubt about many unconfined MOOC issues. By investigating all considerable issues regarding MOOC, the researchers argue that these issues are (1) countable, (2) interrelated

and (3) controllable. The issues didn't exceed a man hands' figures. They are not as uncountable as they were imagined by many researchers. Secondly, they are interrelated; one issue can lead to others. For instance, high dropout rate is related to MOOC accreditation, reputation, and pedagogy. If a MOOC accreditation was solved and offered for exchangeable credit with traditional education, this would boost the completion rate. Moreover, enhancing online courses reputation, in general, and MOOC, in specific, among students and educators may increase the possibility of completion rate among student seeking for appreciation of a society; and so on. Interrelationship between issues is better interpreted by a tree. For example, high dropout rate depends on accreditation issue. Accreditation issue depends on student assessment issue. Therefore, the solution should follow the reverse path: assessment, accreditation, and then high dropout rate. In other words, the solution should be from leaf to root and from bottom to top if applicable. Thirdly, the issues are controllable; there is no reasonable ground to think that these issues are unsolvable. Accreditation, for example, which seems to be one of the most challenging issues for xMOOC, can be managed by (1) start solving dependent issues such as student assessment, and (2) support a comprehensive cooperation between accreditation agency and MOOC partners. Finally, we shall not forget that MOOC is a young project. It didn't exceed the 8 years old! The time is critical to learn and enhance its performance.

In our searching for MOOC issues, we recognize conflicting ideas between researchers. For example, Bartolomé and Steffens (2015) do not see any value of massiveness of MOOC and argue that "there are no pedagogical or psychological reasons why a course with 100.000 students should foster learning better than a course with 100 students" (p. 97). On exactly the opposite, Milligan et al. (2013) argue that "without a critical mass of active participants, a connectivist course would fail" (p. 152). While Bali (2014) makes it clearer; a massiveness of the course allows the interaction between participants to be 24/7, mainly because the time difference between international students. We also recognize a big difference between connectivists' and instructivists' interpretation of the same issues; while instructivists see one issue as threat, connectivists see it as opportunity (AlDahdouh et al., 2015). Connectivism attempts to not fighting e-learners usual activities and choosing the easiest way to look at the issue. Although, some researchers in xMOOC begin to follow connectivists approach and questioning the current criteria of evaluating xMOOC upon the completion rate; "A narrow theory of MOOCs holds that certification indicates learning, and every participant that has not earned a certificate has not learned" (Ho et al., 2015, p. 33).

Despite all issues listed in this paper, MOOC significantly impacts higher education in general, and distance education in specific. Jacoby (2014) examined whether MOOC is a disruptive innovation and concludes that cMOOC is indeed disruptive. Bartolomé and Steffens (2015) compared traditional online course, xMOOC, and cMOOC models where their theoretical analysis shows that cMOOC is better learning environment than xMOOC and traditional online course. Trestini and Rossini (2016) show that previous models of distance learning are showing their limits to interpret massiveness feature of MOOC and therefore suggest new paradigm based on systemic modeling of complexity.

CONCLUSIONS

MOOC is built on solid educational foundations and ideals: at this stage, MOOC are providing a valuable educational service for free, they have a vital connection to distinguished universities (Clarke, 2013). Fact of the matter is, MOOCs are here to stay, in some form or another (Siemens, 2014). They will not only stay: they will grow! More and more countries in Europe, Latin America, Australia and Asia have launched local initiatives in open online learning (Siemens, 2014). The eight issues described in this paper may be seen as part of a normal development of MOOC. These issues are listed in order to help solving them instead of being taken as a pretext for criticism. Our job as educators is to make judgments about where that value lies (Fox, 2013). The value of this paper appears in its holistic view of MOOC issues which in turn may help policy makers to take a proper decision in their way of adopting MOOC. For the universities planning to adopt MOOC, this paper may help them rethink. High dropout rate and MOOC business model are among the critical issues which have to be considered as soon as possible. Research ethics and MOOC pedagogy are long term open research. Language difficulties are important issues for non-English speakers. MOOC reputation needs more efforts from governments as well as universities. The accreditation needs more steps toward a solid solution. These issues listed in this paper are not the only issues regarding MOOC. Students' and educators' competences of computer and internet usage should be considered. The digital gap between who afford the cost of this technology and who are not is another issue to take into account (Hollands & Tirthali, 2014a; Bali, 2014). How bad these issues may be seen, it would be much worse if we pretended not to look at them carefully.

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