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MOOCs at the crossroads: A literature review and reflection drawing upon discourse analysis

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Abstract

This study is a synthesis of 159 articles that were selected for their relevance to comprehend key aspects of the Massive Open Online Courses (MOOCs) phenomenon, from a discourse analysis perspective. Since 2011, MOOCs are expanding worldwide so that the number of subscribers outpointed 101 million at the end of 2018. This paper explores the question whether the MOOCs are the embodiment of the *global one-world classroom* or whether, instead, they represent a low-cost alternative tailored to a segment that doesn´t have enough time or resources to attend a brick-and-mortar college. In addition, the review tackles the link between motivation and low completion rates. Finally, we discuss the need to devise better methods to assess the pedagogical value of MOOCs.

Keywords:
MOOCs
Distance education
Self-directed learning
Self-defined learning pathways
21st century abilities

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1. Introduction

In 2012, a remarkable turning point occurred when Massive Open Online Courses (MOOCs) experience an explosion of offerings, worldwide. Since then, the development of the concept and the emergence of a range of diverse products in the MOOC market (Busta, 2019; Busteed, 2019; Millward, 2019; Moody, 2018) prompted educational researchers to strive to profoundly discern the nuances inside the complexity of the topic (Méndez García, 2013), the real value and true impact of different MOOC formats from a pedagogical perspective (Bali, 2014; Castaño-Garrido et al., 2015; Ebben & Murphy, 2014; Guàrdia, Maina, & Sangrà, 2013), and some related aspects, such as MOOC providers´ evolving *business models* (Baturay, 2015; Feldman et al., 2018), their concerning and extremely high drop-out rates (Feng, Tang, & Liu, 2019; Hone & El Said, 2016; Kloft, Stiehler, Zheng, & Pinkwart, 2014; Murray, 2019; Vitiello et al., 2018), and other facets of the phenomenon that we will try to tackle and explore deeply in this paper.

Education, Mark Twain once said, is the path from cocky ignorance to miserable uncertainty (Leckart, 2012). In this vein, we ask ourselves: Are MOOCs the embodiment of *the global one-world classroom*? What is the educational impact of this so-called "global one-world classroom", if it really exists? Which is the relationship between MOOCs *as a contemporary discourse* and MOOCs as a tangible and measurable "learning-and-teaching" *fact*? Are really *massive* the "massive" open online courses? Are they really "open"?

Each letter of the MOOC acronym requires a profound reflection. For instance, the first letter, M, is clearly an issue, in this regards. Where M stands in for the word *massive*, massive, the adjective, of course needs clarification and debate. Thus, in a postmodern world, while a plurality of readings converge and coalesce into MOOC as an acronym and significant, we propose to fathom into the MOOC meaning from an educational research perspective.

For all that, we draw upon *discourse analysis techniques* to deepen the social understanding of MOOC as a mode of delivering educational content and experiences thereby exploring the relevance of the format/s for pedagogical purposes, mostly in higher education.

1.1. The discourse analysis approach and MOOCs

Text and talk have both a crucial role in meaning production. According to Machin and Mayr (2012), *discourse analysis techniques* are useful tools in order to take "language and visual resources for evaluating social actors, and for signifying broader discourses, ideas and

values that are not overtly articulated" (p. 57) (see also, Gee & Handford, 2011; Schiffrin, Tannen, & Hamilton, 2003; Van Dijk, 2016; Van Leeuwen, 2015).

As we perfectly know, education is positioned at the cornerstone of an evolving discourse system that outruns it. For example, with regard to *curriculum design*, doubtlessly this is a design for 'a future social subject', and by way of that envisioned subject, a design for a future society as well (see Kress, 1996, p. 16). So, being education formats specific forms of a set of discourses and semiotic systems, discourse analysis techniques are essential instruments whereby to uncover implicit meanings and *any* meaning production project, such as MOOCs, regardless of their complexity.

In dealing with MOOCs, discourse analysis stands out as a vehicle to put emphasis *both* on practices of production *and* on practices of reception (of meaning). In our view, the high drop-out rate of MOOCs, in this sense, can be seen as a symptom of a mode of reception that disapproves certain aspects of the offerings, 'voting with the feet'. Even though unraveling the causes of the low completion rate in MOOCs deserves a profound analysis of the format/s and their specific content, the existence of a high drop-out rate brings to light that the original intention geared to offer "massive", "open", online courses was not achieved entirely, so far. Therefore, our aim is to offer a reflection of the meaning of the MOOC acronym by comparing the MOOC discourse with MOOC platforms´ real-world evolution and trends.

All in all, from a discourse analysis and semiotic perspective (see Fairclough, 2003; Rogers et al., 2005, Rogers, 2017), the surge and expansion of MOOC offerings is a sign of the times as well, for the better and for the worse. In this context, the *monomedial text* as the only (or hegemonic) parameter of 'authority' in teaching and learning is debilitating in favor of transmediality (Méchoulan & Carr, 2015; Nesselhauf & Schleich, 2015). This is very relevant in view of Van Dijk´s discourse analysis framework (2014) regarding the centrality of *mental models* in the link between reality, language, and interpretation of reality (see also MacLachlan & Reid, 1994). To clarify the idea, Van Dijk asserts that "mental models are *multimodal*. They represent the complex, embodied experience of events and situations, including visual, auditory, sensorimotor and emotional aspects of an experience" (p. 5). And we could add every *educational experience* as well. This is the reason why technology-enabled education offers the potential to create contents that are aligned with, or are in sync with, humans´ mental models. Thus, multimodal discourse, media and mediation join up, and are mutually influenced (see also Blitvich & Bou-Franch, 2018; Scolari, 2015).

1.2. MOOCs as a discourse

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In an editorial published in Elsevier´s *Cell Systems* in 2017, H. C. Mak underscores the relevance for the scientific community to harness online-, micro-, nano-, and blended learning formats inside the MOOC movement´s offerings as a new stream of possibilities for strengthening the formation of biology researchers already working (or aspiring to work) in labs around the world (Mak, 2017). And Yousef, Chatti, Schroeder and Wosnitza (2014) point out that MOOCs mean a new technology-enhanced learning approach in higher education, as well. In this regard, one of the main themes of their reflection revolves around the notion of whether *passive participants* in MOOCs can (or should) be somehow *active learners* and the implications of this notion. Thus, in these previous two examples and in others, we can focus on MOOcs as a *discourse*. In our view, these positive statements are valuable to evince the type of "disruption" that MOOCs, according to some observers, are causing in the education landscape (see Adamopoulus, 2013; Head, 2014; Hoxby, 2014; Milheim, 2013; Mondal, 2017; Paldy, 2013; Perna et al., 2014; Signorelli & Hovious, 2014; Stephens & Jones, 2014). Further, in analyzing a large-scale corpus of text encompassing news media stories produced between January 2012 and December 2013, Bulfin, Pangrazio and Selwyn (2015) asserted that: a) MOOCs are clearly a disruptive and portentous development in the current higher education marketplace, b) in a certain way, MOOCs are reinforcing the established *status quo* in higher education—offering an alternative 'way in' to later study for 'proper' courses at 'proper', 'face to face' in brick-and-mortar universities, c) the MOOC discourse differ considerably to the ways in which MOOCs have tended to be imagined and discussed within specialist educational technology circles, and d) the relatively high levels of student dropout and disengagement from courses reveals the presence of a serious source of concern and a space of inconsistency between discourse (promise) and reality.

1.3. *The MOOCs market*: *some numbers*

Though the term MOOC was originally coined by George Siemens and Stephen Downes in the fall of 2008 in organizing a course on 'connectivism and connective knowledge' at the University of Manitoba, Canada (Gong, 2018), the MOOC market reached a significant size from 2012 on, when the number of MOOC-platform providers and MOOC offerings substantially took the ascending form they have today.

In 2018, more than 900 universities offered more than 11,400 MOOCs to 101 million subscribers (Shah, 2019). The global MOOC market is growing. It was valued at US$3.61

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billion in 2018 and is expected to reach approximately US$25.33 billion by 2025, which means a composite annual growth rate (CAGR) of slightly above 32.09% between 2019 and 2025 (Zion Market Research, 2019). Additionally, according to public sources, among the four biggest MOOC platform providers, privately-owned *Coursera* generated about US$140 million in 2018; *Udacity* earned US$90 million for the year; *edX* took in about US$57 million for fiscal year 2017; and UK-based *FutureLearn* made about £8.2 million (see data from Schaffhauser, 2019). These data show that the business model of the leading MOOC platforms have changed since 2016, towards a format more attentive to revenue sources and revenue streams (ET, 2018).

1.4. *Research questions*

As part of a large research and development project, this study aims to deepen our understanding of the MOOC phenomenon. Thus, in what follows, we present the three research questions that are the backbone of this paper:

RQ1: Which are the main *conclusions* we can obtain so far from a published literature review about the educational debate on MOOCs?

RQ2: Which are the main *features* of the MOOC platform providers´ websites we can currently observe as a discourse and as a sign of their business models and value proposition?

RQ3: What can we learn from a *discourse analysis perspective* applied to chat boxes´ dialogues and asynchronous and synchronous discussion forum comments inside MOOC platform providers´ websites?

2. Materials and Methods

The literature search was undertaken between April 25, 2019 and May 15, 2019 to identify peer-reviewed articles in English language, published between 2012 and 2019. Besides, a selected number of Spanish language papers were added when we deemed that they were of value for a better understanding of the current trends and directions inside the MOOC field of study. High-quality book chapters were also part of the accepted literature. Seventeen databases were included as sources of bibliographic data, i.e., Elsevier´s Science Direct (https://www.sciencedirect.com), Oxford University Press (OUP) Journals Database (https://academic.oup.com), Cambridge University Press (CUP) Journals Database

(http://www.cambridge.org/core), Wiley Online Library Database (https://www.onlinelibrary.wiley.com), ProQuest (https://www.proquest.com), Springer Journals Database (http://link.springer.com), Taylor & Francis Journals (http://www.taylorfrancis.com), Sage Journals, Google Scholar, Google News, JSTOR (https://www.jstor.org), EBSCO (https://journals.ebsco.com), Elsevier´s Social Science Research Network (SSRN) Database (http://www.ssrn.com), ResearchGate (https://www.researchgate.net), Academia.edu (www.academia.edu), Scopus Journals Database and Medline PubMed (https://www.ncbi.nlm.nih.gov).

Keywords included the following: "MOOCs", "MOOC platforms", "MOOC market", "MOOC business models", "MOOC drop-out rates", "e-learning", "online learning", "collaborative learning", "technology-enhanced learning", "lifelong learning", "discourse analysis", and "discourse analysis techniques". References of retrieved articles were assessed for relevant articles that our searches may have missed.

Selected MOOC-platform providers´ websites, e.g., *Coursera* (www.coursera.org), *edX* (www.edx.org), *Udemy* (www.udemy.com), *Udacity* (www.udacity.com), *Stanford University Online* (https://online.stanford.edu/programs), UK´s *FutureLearn* (https://www.futurelearn.com), OpenupEd (https://www.openuped.eu), New York City-based *Flatiron School* (https://flatironschool.com), France´s *Université Numérique* (http://univ-numerique.fr), Spain´s *MiríadaX* (https://miriadax.net/home), Italy´s *EduOpen* (wwws.learn.eduopen.org), *Kadenze* (www.kadenze.com), China´s *XuetangX* (http://www.xuetangx.com/global), India´s *NPTEL* (https://nptel.ac.in), India´s *Swayam* (https://swayam.gov.in), and the Arab World´s *Edraak* (www.edraak.org), were analyzed in order to evaluate MOOCs curricula design features, number and diversity of MOOCs offerings, course materials, prices, participating educational institutions, discussion forums, and rules for users, coupled with the quality of interfaces and user navigation pathways.

3. **Results**

This study is a synthesis of 159 articles mostly published between 2013 and 2019 that were selected for their relevance regarding one or more aspects of the complex MOOC phenomenon, from an educational research perspective. Because there seems to be very little that it is not possible to do online, online learning has become a strong option when deciding what format of education people will choose for learning. So, MOOCs are an excellent expression of these new trends in the digital era. However, as the evidence shows, there are

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still some barriers to overcome. For example, time management skills are central. Therefore, in order to be an effective learner one has to learn to be a good *self-directed learner*. Otherwise, the impact of the MOOC on proficiency, new competencies acquisition, and expertise will be very limited because the participant will drop out before completion (Abbakumov, Desmet, & Van den Noortgate, 2018).

In the following subsection, we will focus on a review of the literature on MOOCs from 2013 to 2019.

3.1. Review of the literature on MOOCs

Last year, Zhu, Sari and Lee (2018) provided a systematic review of the recent empirical literature on MOOCs. They explored a set (*N*=146) of empirical studies published between October 2014 and October 2016. Just as these papers applied either quantitative (45.9%) or qualitative (18.5%) approaches, in some cases, they used instead a mixed or combined analytic method (35.6%). Even though the authors´ aim was to increase the awareness of *methodological issues* and to make recommendations for future research, the set of dimensions explored by the empirical studies were diverse, including curriculum design, engagement, retention, massiveness and pedagogical impact, among others. As a drawback, they selected their journal articles from *only* 12 different journal titles, so as the word "systematic" in this 'systematic review' could be somehow put into question. Notwithstanding, Zhu, Sari, and Lee´s paper was very useful for the present conceptual study, for their findings brought to light 24 distinct topics inside the MOOC field. In descending order, the 6 most cited topics were: a) motivation, b) retention, completion and drop-out, c) assessment, measurement and evaluation, d) instructional and MOOC design, e) learners´ experiences, and f) satisfaction.

It is worth noting that Zhu, Sari, and Lee´s intelligent paper is an extension of previous review studies on the MOOC field that encompassed different periods, i.e., 2008-2012 (Liyanagunawardena, Adams, & Williams, 2013), 2008-2015 (Bozkurt, Akgün-Özbek, & Zawacki-Richter, 2017), 2009-2013 (Ebben & Murphy, 2013), 2013-2015 (Veletsianos & Shepherdson, 2016) and April 2014 to April 2016 (Deng & Benckendorff, 2017).

MOOCs have been described as "free" courses, offered to a large number of learners at once, with *open* registration, and conducted via short video lectures, online assignments, interactive devices, multimodal language, and self-administered multiple-choice exams (Bass, 2014; Breslow et al., 2013; Chang & Wei, 2016; Hood, Littlejohn, & Milligan, 2015; McLaren, Donaldson, & Smith, 2018; Méndez García, 2013; O´ Prey, 2013; Reeves & Hedberg, 2014).

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From a discourse analysis perspective, both the M letter ("massive") and the first O letter ("open") require a debate. If "massive" refers to "a large number of learners at once", we can use comfortably the word "massive" to depict one of the supposed attributes of MOOCs. On the whole, it is clear that MOOCs, as it was just demonstrated, can reach a number of learners (audience) that a traditional in-classroom course is not capable of reaching. Hence, *massiveness* is a key concept to characterize any MOOC and any MOOC platform, albeit the world population is over 7 billion people. Nevertheless, this extensive literature review shows that "massiveness" and "openness" are concepts in flux. For instance, some authors interpret that the adjective "open" refers to "an open modality of registration" by which—contrary to what is common practice in elite universities—learners are not required to exhibit previous credentials or degrees to sign up for a post-secondary MOOC (see Farrow, de los Arcos, Pitt, & Weller, 2015; Stewart, 2013). But being a subscriber (or a "registered user") is not synonymous with being an *active learner*. According to *Class Central´*s founder and CEO D. Shah (2019), MOOC-platform providers attained an aggregated record number of 101 million "students" in 2018 (equivalent to 1.15% of the world population). To such an extent that the curve of the sector displaying the number of subscribers as a variable in relation to time forms the ascending part of a S-shaped curve or sigmoid curve. It is worthy of note here that some individuals are signed up for two or more different MOOC platforms simultaneously; therefore, the number of cumulative registered users of the sector is consequently higher than the number of individuals that once signed up for in a MOOC platform.

In coincidence with Cronin´s standpoint "the qualifier *open* is variously used to describe resources (i.e., the artefacts themselves as well as access to and usage of them), learning and teaching practices, institutional practices, the use of educational technologies, and the *values* underlying educational endeavors" (Cronin, 2017, p. 16). Other authors point exclusively at the openness in the use of content or software along the learning process. Hence, the word *open* is polisemic, from a semantic perspective.

Sloep and Schuwer (2016) maintain that what the term "open" seems to carry as a significant is its reference to the *removal of barriers to the access of education*. But, in our view, access to a two- or three-week-long MOOC per year, however free it can be, is not a perfect *equivalent* to 'access to education'. Therefore, an "open" admission rule does not mean "open" in a sense of "free of charge". Precisely, many MOOC platforms are going through a transition towards a business model with more *paid-only* courses and less free-of-charge ones, with the purpose of propping up their financial sustainability (Belleflamme & Jacqmin, 2015; ET, 2018; Jia, Song, Bai, & Xu, 2017; Shah, 2016; Weller, 2015).

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As regards the *motivation* topic, the literature underscores that, as a factor, it is related to the high drop-out rate or low completion rate usually observed in MOOCs (Bakki et al., 2017; Barak, Watted, & Haick, 2016; Castaño-Garrido et al., 2015; Huang & Hew, 2016; Magen-Nagar, 2017; Wang & Baker, 2015, 2018; Watted & Barak, 2018; Ye & Biswas, 2014). In an extensive study, Xu and Yang (2016) offered a classification of learners into 3 categories as a function of their type of motivation, namely: a) certification earning, b) video watching, and 3) course sampling. In the first group, individuals often have a high rate of completion because the participants´ main purpose is to obtain a certification or, at least, a 'statement of achievement' from a prestigious educational institution. To the contrary, those inside the second group are not interested in obtaining a diploma, so they usually limit themselves to being video watchers, trying to leverage certain contents (they think) that are of value for them. And the third group consists of a segment of MOOC users that are exploring the platform´s MOOC offerings and taking fractions or parts of courses only as a free sample.

While various studies on motivation and engagement outline the need to devise new measures to raise completion rates (see Greene, Oswald, & Pomerantz, 2015; Li, Wang, & Tan, 2018; Littlejohn et al., 2016; Zhou, 2016), a clear strategy to prevent drop-outs is not easy due to practical and contextual reasons (Kloft et al., 2014). However, Kim et al.´s experimental study (2017) from South Korea suggests that, on the basis of psychological reactance theory, MOOC designers and providers should have to restrict accessibility and limit repeatability of online courses. As they explain, learners should have *to escape from infinite freedom*. Also, in trying to understand the causal chain of the low completion rate in MOOCs, Eriksson, Adawi, and Stöhr (2017) identified 4 main factors that exert influence on the dropout rate, that is, a) the learner's *perception* of the course *content*, (b) the learner's *perception* of the course *design*, c) the learner's *social situation* and characteristics, and d) the learner's ability to find and *manage time* effectively. Further, Alraimi, Zo, and Ciganek (2015), in a research study focusing on factors that influence *continuance* in MOOCs underline that: a) perceived reputation, b) perceived openness, c) perceived usefulness and d) user satisfaction are the main elements that stand out. Doubtless, the perception of course design is linked with features of the *pedagogical quality* of the course. Margaryan, Blanco, and Littlejohn (2015) generated valuable evidence when they carried out an assessment of *instructional design quality* of 76 randomly selected MOOCs. According to the authors, the majority of evaluated MOOCs scored poorly on most instructional design principles but most MOOCs scored highly on organization and presentation of course material. As a consequence, the results contribute to conclude that although most MOOCs are well-packaged, their instructional design is low, so

there is room for improvement to stimulate student retention (see also Al-Rahmi et al., 2019; Brooker, Corrin, de Barba, Lodge, & Kennedy, 2018; Xiong, Li, Kornhaber, Suen, Pursel, & Goins, 2015).

3.2. An overview of selected MOOC platform providers´ websites

Founded on June 16, 2015, Kadenze Inc. is a for-profit MOOC platform provider. As of May 2019, it offers a total of 217 MOOCs—mostly about art and music—, among which are 28 *credit-eligible* courses. Credit eligible courses are courses that can be taken for 'a transferable college credit' from the offering institution. For example, the *Contemporary Museum Education* course for beginners, in association with the New York City-based Pratt Institute, is a 5-session (10 hours of work per session) course that is "free" but is credit-eligible in exchange for US$ 300. Also, once completed, the platform awards a 'certificate of achievement' provided that the user obtains a grade of 65% or higher and is a premium member, in exchange for US$ 20 per month. *Only* premium members can view certain videos, submit assignments, enjoy discounts in course materials such as software, and receive grades and feedback from instructors. This case shows that the value proposition and business model of some MOOC platforms *combine* the benefits of free registration, short length, and visual technologies with specific *paid-only* accessibility rules with respect to credits and certificates of achievement, that a segment of participants regards desirable, but others not. This is known as a *tier-based membership model* or a *multi-tier pricing scheme* (see Gullhav & Nygreen, 2016). Furthermore, Kadenze has two types of courses, i.e., scheduled and adaptive courses. A schedule course follows a set calendar with start and end dates. On the contrary, in adaptive courses, each participant progresses at his/her own pace.

UK´s FutureLearn, a non-for-profit, was founded in 2013. It has 82 educational partners and offers 303 courses organized in 13 different categories, such as Literature, Nature & Environment, and Politics & the Modern World, among others. Most of the courses are six to ten weeks long and are intended to be at undergraduate level. Like Kadenze, FutureLearn offers a free membership. But, besides, it provides an 'upgrade membership', by which participants, if they are eligible, have an exclusive right to receive a 'certificate of achievement'. Additionally, it gives an additional option to take an 'unlimited membership' in exchange for US$ 199 per year to get access to all the courses and, once completed, their respective certificates of achievement. In addition, courses are clustered into programs. For example, the *Digital Media Analytics* program is made up of 7 courses with a total duration of

15 weeks. Those who complete the 7-course program receive three credits for the Purdue University Graduate School´s Masters of Professional Communication degree program.

Spain´s MiríadaX offers 473 courses with 87 educational partners. One of the courses is *The Art of Developing Entrepreneurial Leaders* (2nd. edition) in association with Universidad del Rosario, with a duration of 4 weeks (24 estimated hours of self-study time) at a price of €40.

Coursera, the largest MOOC provider by the number of registered users, offers 1 week free of charge in all courses, as a sample, but the registrant has to pay a monthly fee at the end of the first week to stay as an active student. One of the conditions of the initial registration is to give the credit card number.

Further, Udacity offers a set of free courses, e.g., *Artificial Intelligence for Robotics* in collaboration with Georgia Tech University, which is composed of 24 lessons. The courses are organized into programs, such as Artificial Intelligence, Data Science, Programming & Development, Autonomous Systems, and Business. This MOOC platform stands out because it shows efforts to connect participants with an enrollment advisor and career coaching sessions to evaluate career and new job opportunities. For space reasons, a detailed description and critique of MOOC platforms´ characteristics will be published in an upcoming paper.

3.3. Discourse analysis of the MOOC industry narrative

To start with, we want to focus on certain statements such as the following: "(…) While *by definition*, the MOOCs are *free* and *open-to-all*, the MOOC platforms *sell value-added* MOOC services *for profit*, and it is a common model in Internet services called the *freemium* strategy" (Jia, Song, Bai, & Xu, 2017, p. 2). In this respect, Kumar (2014) explains that a 'freemium business model' is often used by some digital businesses and smart-phone application developers to give users *free* basic features of a digital product and access to *premium functionality* for a *subscription fee*. Whereas the freemium business model is being adopted by for-profit MOOC platforms—such as Coursera and Udacity—most firms suffer from too few premium subscribers, which challenges their profitability (Koch, 2017). But the main point here is conceptual, not financial. Will MOOC-platform providers be able to deliver their original promise to offer an "open-to-all" online education when the best courses have a price, and the price barrier is, for some, a barrier to access? (see also Bernhard, Bittel, Van Der Vlies, Bettoni, & Roth, 2013; Burd, Smith, & Reisman, 2015).

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"The shimmery hope is that *free* courses can bring the *best* education in the world to the most *remote* corners of the planet, help people in their careers, and expand intellectual and personal networks", said Laura Pappano in *The New York Times* in Nov. 2, 2012 (Pappano, 2012). However, some barriers persist before this idealistic vision. In an interesting article published in *Science*, Kizilcec, Saltarelli, Reich, and Cohen (2017) stressed the existence of a *global achievement gap* in MOOC-enabled learning. For example, using data from 68 MOOCs offered by Harvard and MIT in the 2012-2014 academic years, Hansen and Reich (2015) found that course unique participants (*N*=1,028,269) on the edX platform from the US tended to live in more affluent and better-educated neighborhoods than the average US resident. Among those who do registered for courses, students with greater socioeconomic resources were more likely to earn a certificate. Further, these differences in MOOC access, retention and completion rates were larger for adolescents and young adults, the traditional ages where people find on-ramps into STEM coursework and careers. So, Hansen and Reich´s findings raised concerns that MOOCs and similar approaches to online learning can *exacerbate* rather than reduce disparities in educational outcomes related to socioeconomic status. Additionally, a recent study confirmed that the vast majority of MOOC learners never return after their first year, the growth in MOOC participation has been concentrated almost entirely in the world´s most affluent countries, and the bane of MOOCs, i.e., low completion rates, has not improved over 6 years (Reich & Ruipérez Valiente, 2019). To see more empirical evidence on inequality of acces to MOOCs, see also Adham and Lundqvist (2015), Christensen et al., 2014, Gameel and Wilkins (2019), Karr (2014), Rohs and Ganz (2015), Selingo (2014a) and van de Oudeweetering and Agirdag (2018).

3.4. Discourse analysis of conversations at MOOC platforms on MOOCs

A MOOC user, Aung K., says in a chat conversation at UK´s *FutureLearn*:

> "I like to learn courses a lot, but I can´t find *any* free time for that. *Sometimes, I just forgot the course*, may be I am not so serious on learning as I have *lack of motivation* on lea(r)ning online. But I hopefully this short course can (s)how me the way to learn online courses".

As we can see, from a discourse analysis perspective, this statement is very rich as it highlights what a segment of current learners are facing up with respect to the topic of the 'scarcity of time' and certain time management deficits, in the global contemporary society.

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This was observed when trying to accomplish a specific schedule, even in an online 2-week short course with a workload of only 3 hours per week untitled 'Get Started with Online Learning', by the Open University. Further, this comment adds a perspective on the high drop-out rate of the MOOCs, in general, which is, in a certain way, linked with "the lack of motivation".

Regarding the nexus between online life and online education, Laura H., a lead educator at *FutureLearn* affirms: "In 2014, 38 million adults (76%) in the UK accessed the internet *every day*. This is 21 million more than in 2006, when directly comparable records began". This jump in the numbers in only 8 years outlines the current scenario in relation to online activities, at least in a developed country the size of UK.

Also, Tetiana Z. adds: "Online education is a good opportunity to find and choose *what I really want and need*" putting into her own words what scholars regard as self-defined learning pathways, which is a notable characteristic of MOOCs. In another public chat box, Georgina O. says: "The line and boundary between formal and informal learning has been blurred". Additionally, on the online learning process, Irina K. points out that "there is no any contact face to face and it is probably the weakest side of such communication".

With regard to feedbacks and the interaction with tutors, Sandra C. says:

> "(…) When we are studying, we do need to be able to *hear the negatives as well as the positives*, this is *the only way we can learn and progress*. I think I am reasonably good at accepting constructive criticism, although I must admit I am more receptive if I don't know I am receiving it".

One of the distinguishing features of MOOCs´ discussion forums is that peer-to-peer contact enriches the learning experience and forms a network of trust, cross-cultural sharing, motivation and collaborative problem-solving (Damary, Markova, Pryadilina, 2017; Kuong, 2015; Sharif & Magrill, 2015) with a positive impact on retention rates, and knowledge acquisition (Swinnerton, Hotchkiss, & Morris, 2017).

Jones, Chik, and Hafner, (2015) in *Discourse and digital practices: Doing discourse analysis in the digital age* maintain that "in some cases, the tools that have been developed for face-to-face conversation and writing in print media can be easily adapted to analyze online conversations and texts" (p. 8). Even though the value of the analysis of discussion forum posts has certain limits due to the fact that online participants are registered users of the MOOC in question, some statements are useful to bring to light the style and relationship between learners´ expectations and the new learning digital platform content and instructional design

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(see also, Anbalagan, Kumar, & Bijlani, 2015; Bernad-Mechó, 2015). All in all, the study of digitally-mediated communication in some ways forces us to rethink our very definitions of terms such as text, context, interaction, satisfaction, and power (Gardner & Brooks, 2018; Gee & Handford, 2011; Woods, 2006).

4. Discussion

A process of massification of education does not necessarily means education of low quality for all. Rather, the ongoing evolution of digital media is creating a new condition of possibility whereby to expand the number of individuals, of all ages, that can receive a high-quality education experience. Naturally, the growing number of registered users in MOOC platforms documented since the successful experiment carried out by Stanford University faculty members Sebastian Thrun and Peter Norvig in the fall of 2011 is revealing a power shift from a traditional mode of provision of education inside the walls of a brick-and-mortar university towards an experimental form of learning that can be accessible to whoever has an internet access (Brahimi & Sarirete, 2015; Brazas & Oullette, 2013; Schophuizen, Kreijns, Stoyanov, & Kalz, 2018; Wrigley, Mosely, & Tomitsh, 2018).

However, the whole picture is more complex. As Selingo (2014b) clearly stated, "MOOCs put students in control. Students can do as much *or as little as* they want at any time, one reason that *many never complete the courses*. Roughly one in 10 finishes".

In this vein, Jordan´s study (2014), in assessing a sample (*N*=279) of MOOCs from different platforms, corroborated that the average MOOC course was found to enroll around 43,000 students, of whom only 6.5% completed the course. This means a dropout rate of 93.5%. Moreover, her findings bore out that completion rates were consistent across time, university rank, and total enrollment, but were negatively correlated with course length, that is, the longer the course, the smaller the completion rate. In another study, on the edX platform, there were 43,196 students that earned the certificates of completion among a total of 841,687 registrants, hence, the completion rate was barely 5.1% (Ho, Reich, Nesterko, Seaton, Mullaney, Waldo, & Chuang, 2014). Owing to the fact that this extremely low completion rate was also confirmed by other authors (e.g., Breslow et al., 2013; Koller, Ng, & Chen, 2013; Li & Baker, 2018), this is still a cause of profound concern in the MOOC field of study (Meinert, Alturkistani, Brindley, Carter, Wells, & Car, 2018).

Still, Henderikx, Kreijens, and Kalz (2017), from the Netherlands, offer an alternative view. They contend that a certificate-centric or a completion-centric form of evaluation is not the

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most appropriate option to obtain a conclusion on the pedagogical impact of MOOCs. They maintain that "framing *success* from a certificate- and completion-centric view will nurture a false understanding of success and dropout in MOOCs, which may subsequently lead to unnecessary interventions and unjustified negative reviews" (p. 2). The core of their thesis revolves around the following concept: Students entering education might have *intentions* other than receiving an end qualification. Therefore, they propose that success measurements of MOOCs should be interpreted with MOOC-takers´ intent in mind, that is, with a more learner-centered approach.

The best way to measure the proficiency of students that completed a MOOC or a set of MOOCs is in discussion (Bryson, 2017; Steffens, 2015; Terras & Ramsay, 2015; Zhong, Zhang, Li, & Liu, 2016). For example, Abbakumov, Desmet and Van der Noortgate (2018), using a modification of the Rasch model, found that the measurement of proficiency is complex and relatively inaccurate because: a) assessments are dynamic and, in MOOCs, new content can be added, removed or replaced by a course designer or provider at any time; b) students are allowed to make several attempts within one assessment; and c) assessments include an insufficient number of items for accurate individual-level conclusions. And in coincidence with these authors, other scholars affirm that, given the open nature of MOOCs, better tools are still needed to evaluate the pedagogical impact of MOOCs properly (Cabrera & Fernández-Ferrer, 2017; Chapman, Goodman, Jawitz, & Deacon, 2016; DeBoer, Ho, Stump, & Brelow, 2014; Del Peral Pérez, 2019; Duart, Roig-Vila, Mengual-Andrés, & Maseda Durán, 2017; Jung & Lee, 2018; Kesim & Altinpulluk, 2015; López-Meneses, Bernal, Leiva, & Martín, 2018).

Moreover, some authors have identified different subgroups among MOOC-takers with different profiles in relation to engagement, completion rates, accomplishment, and learning outcomes. For example, Li and Baker (2018) found heterogeneity in behavioral patterns among learners that is expression of different levels of engagement, and *different reasons why participants decide to engage* (see also Walji, Deacon, Small, & Czerniewicz, 2016; Williams, Stafford, Corliss, & Reilly, 2018; Zhang, Cesar Bonafini, Lockee, Jablokow, & Hu, 2019). In sum, they conclude that in MOOCs the existence of *self-defined learning pathways* generates the need to apply different measures to discern the way learners are taking advantage of the content of the courses (see also Petronzi & Hadi, 2016; Reilly, Williams, Stafford, Corliss, Walkow, & Kidwell, 2016; Shapiro, Lee, C. H., Wyman Roth, Li, Çetinkaya-Rundel, & Canelas, 2017; Tseng, Tsao, Yu, Chan, & Lai, 2016).

Advocates of MOOCs-based learning proclaim that MOOCs have the potential to "equalize" the playing field by eliminating barriers such as tuition costs, age, prerequisites, time constraints, and selective admission policies (Ebner, 2016). But, at the same time, critics have expressed fears because they envisage that the advent and proliferation of MOOCs in higher education will accelerate a deterioration of the University system by creating a two-tier education, i.e., a first-class, high-cost offering for the privileged and the few, and a second-class, low-cost, internet-delivered offering for the underprivileged (Schrag, 2014; Young, 2018).

The distance between massive enrollment and low completion rates has convinced many to put into question the pedagogical value of MOOCs and their capacity to transform higher education for the better. This is the reason why the topic still elicits ambiguity among educators (Schophuizen et al., 2018). Because entirely online learning has advantages and disadvantages (Fernández-Díaz, Rodríguez-Hoyos, & Calvo Salvador, 2017; Vázquez Cano & López Meneses, 2014), some scholars, instead, are encouraging the adoption of a hybrid or blended format of teaching and learning (Bruff, Fisher, McEwen, & Smith, 2013; Emanuel & Lamb, 2015; Fidalgo-Blanco, Sein-Echaluce, & García-Peñalvo, 2016; García-Peñalvo, Fidalgo-Blanco, & Sein-Echaluce, 2018; Nortvig & Christiansen, 2017; Slomanson, 2014; Trentin & Bocconi, 2014).

Finally, it is important to add that despite the unresolved debate regarding the role and real impact of MOOCs on higher education´s future, MOOCs are clearly a valuable tool as an alternative form of delivery of education in conformity with lifelong learning requirements in the 21st century society (Quendler & Lamb, 2015; Volles, 2014).

5. Conclusions

Since 2012, MOOCs exhibit a great potential to satisfy the needs of a growing segment of the educational market, specially, among those that have time constraints or insufficient resources to comply with the prerequisites of a conventional higher education program. This innovation is suitable for learners that have persistence, a high degree of self-motivation, are in search of a new employment, and are able to develop a self-defined learning path. Yet, according to the evidence, it remains to be seen whether this form of delivery of education is an appropriate way of democratizing education and making an *open-to-all* learning a reality, regardless of language proficiency, place of residence, capacity to engage, and cultural competencies.

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