# The Diffusion and Social Implications of MOOCs

## A Comparative Study of the USA and Europe

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## Chapter 9

## Conclusions



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# 9 Conclusions

MOOCs were introduced with various promises: democratizing access to education, solving long-lasting social problems of access to education for social groups traditionally excluded from it, and providing millions of workers around the world with convenient reskilling and upskilling opportunities. These promises sounded irresistible, and the media hype surrounding them was indeed convincing. In 2012, MOOCs were named the year's most important discovery, and for a certain period, it seemed probable that they would soon be competing with universities and higher education systems. However, as we know from this book (and from many other academic publications which have taken the MOOC phenomenon seriously), such promises proved unfounded. A growing body of empirical research showed that the MOOCs were not targeting exactly the typical persons in need; rather, they attracted highly-educated, male, white learners living in wealthy countries or neighborhoods. Moreover, these were also the learners who could perform better and, consequently, benefit the most from this form of cheap lifelong learning. Lastly, the MOOCs did not replace universities at all: universities are still secure and rather englobed MOOCs for various purposes. The attractive elite universities leveraged MOOCs to enhance their global reputations; some others outsourced continuing vocational training to the MOOCs; while others (mainly in Europe) use MOOCs for experimenting with learning models.

So, one may ask, why a book on MOOCs, and what can their story still tell us in 2020s?

As the resurgence of MOOCs in 2020 during the COVID-19 pandemic showed, MOOCs were only the most visible part of a broader and powerful trend which concerned the digitalization of many aspects of people's lives. The MOOCs were one of the many expressions of a techno-solutionist approach which claimed that it could solve complex social problems with the use of technology. The techno-solutionist narrative proved strongly resilient and indeed reappeared in spring 2020 with the new wave of interest in online learning in general (and in MOOCs in particular) that arose during the COVID-19 pandemic.

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Therefore, this book has taken up the challenge of providing an encompassing and multilevel analysis that highlights the social complexity of the MOOC phenomenon, its consequences, and the challenges that it poses for a social scholarship. The book has furnished new insights into the phenomenon of MOOCs by means of a complementary mixed-method research design that combines quantitative and qualitative data from various sources and adopts a comparative approach that identifies the different patterns of MOOC diffusion and their social implications in the USA and Europe.

Finally, this ambitious agenda has been pursued along three main lines of inquiry. Part 1 of the book started the investigation of the MOOC phenomenon from the macro-level perspective. It did so by analyzing the institutional impact of MOOCs on the ecology of higher education systems in the USA and Europe. This part investigated who were the key actors involved in the production and supply of MOOCs on the two sides of the Atlantic, and it explored the extent to which the spread of MOOCs may have changed the dynamics among institutions in the same organizational field of higher education.

Part 2 of the book shifted the analysis to the micro level. It concentrated on the attitudes and behaviours that registered users of MOOCs show when they enroll for and study on a MOOC (the upstream side of the MOOC experience). This part sought to understand whether the dynamics responsible for the unequal opportunities to access education and training observed for formal education may be reproduced in the context of MOOCs. Broadly speaking, the second part of the book tried to answer the following questions: do MOOCs contribute to reducing inequalities of educational opportunity? Who are MOOC learners and what socio-economic characteristics are associated with success in (or drop out from) MOOCs?

The third part of the book maintained the focus on the micro level by investigating what happens "downstream" from the MOOC experience, i.e. what learners do once the MOOC is over (whether they have completed the course or only studied some modules). This third section thus tried to answer the following questions: What are the returns to MOOCs in terms of skills formation and occupational outcomes? What uses are made of MOOCs by learners? And what type of benefits may stem from a MOOC?

The following sections discuss the main results emerging from each part of the book and provide some final considerations.

## 9.1 A European way to MOOCs?

The MOOCs phenomenon, as we know it today, is undoubtedly a product of the US higher education system, of its internal dynamics, and of its close relationship with the technological sector. The mainstream MOOCs originated from bottom-up initiatives led by charismatic computer science professors whose faith in the salvationary potential of technology paired well with the entrepreneurial spirit of Silicon Valley. These experiments were

then englobed in more structured university-led endeavors. The flourishing of the MOOCs was at the same time the consequence and the accelerator of two trends traversing the US HE system: on the one hand, the growing legitimacy acquired by computer science and the internet ideology in society; on the other, the competition among elite universities for the redefinition of power roles at the top of the HE hierarchy (Gebre-Medhin, 2018).

The MOOC-mania soon spread worldwide, and in Europe, after 2013 several MOOC initiatives were launched by European HE institutions. However, since MOOCs were not created in a vacuum, the institutional context mattered and path dependence dynamics played a crucial role in shaping the pattern by which MOOCs spread in Europe.

Indeed, compared to the USA, the spread of MOOCs in Europe exhibits unique features that can be summarized in three key aspects: (i) the type of actors involved; (ii) the institutional logic driving European initiatives; and (iii) the structure of supply of MOOCs.

The US and Europe are characterized by profound differences in the structure of their HE systems; dissimilarities that are mirrored in how MOOCs spread in the two areas. The first key difference between Europe and the USA is that a European common HE system does not exist. Despite efforts to harmonize the various national systems through the Bologna Process, each Member State still maintains its own authority over education, including the higher education system. A second important difference is the structure of the HE system. The US HE system is a multi-tier structure, highly stratified and diversified, with a handful of 4-year selective elite liberal arts colleges and research universities that constitute the top tier (involving only a tiny minority of all US students), and a large base of *broad access schools* that admit the majority of applicants and range from 4- to 2-year programmes at public or private organizations. Instead, most European countries have a larger public component, and their HE systems are less diversified and stratified than those in the USA.

As regards the actors involved in the MOOC development, European MOOC experiences have been supported since the beginning by an active and participatory role of governmental initiatives led by the European Commission at the super-national level and by national Ministries at the state level. In this context, regional and national policies have been considered key enablers in supporting the growth of MOOCs. They have funded specific programmes for the spread of MOOCs and even directly funded public platforms for the provision of MOOCs. The public nature of these initiatives has meant that the development of MOOCs in Europe has been generally (though not exclusively) led by public actors and is less oriented by market principles compared to the leading private companies providing MOOCs in the USA (such as Coursera and Udacity). However, this greater reliance on public actors and in particular on European funds has in the long run represented a weakness, since some pan-European projects – including the MOOC Scoreboard, the only attempt to provide regular monitoring of and

reliable statistics on European initiatives – have been terminated or struggle to secure regular funding.

This leads to the second point: the "institutional logics" that characterize MOOC experiences on the two sides of the Atlantic. From the outset, the spread of MOOCs in the USA has exhibited features typically pertaining to the "economic paradigm", with major MOOC platforms following (or drifting towards) for-profit principles and reducing free access. Recently, mainstream MOOCs have indeed lost the second O of their acronym, the one that stands for "open" in terms of both accessibility and content. With the significant exception of Future Learn, the UK-based platform which ranks among the top 3 MOOC providers globally and follows typical market principles, all other European initiatives show greater concern for preserving the original openness and accessibility features inherited from the Open Education movement. Therefore, while most of the leading platforms have shifted toward professional courses targeted on upskilling and reskilling the labour force, there are several European initiatives that tend to oppose the neoliberal and techno-solutionist view of MOOCs in favor of learning experimentation, enlarging the audience of potential learners, and preserving accessibility and openness. Another key point in this regard is the attention paid to the cultural and linguistic diversity of the European context. Although the majority of the courses provided by European institutions are in English so that they can reach a wide audience, several experiences advocate linguistic and cultural diversity, either directly (e.g. FUN, EMMA) or indirectly (e.g. Spanish HE institutions on MiriadaX).

The third element of diversity concerns the structure of the supply. As seen in Chapter 2, despite a steady growth of courses offered and a substantial increase of learners during the COVID-19 pandemic, the overall number of MOOC providers has remained quite stable since 2013, leading to an increasing concentration of supply in the hands of a restricted group of platforms. The recent decision to sell MiriadaX, a large Spanish platform targeting an Ibero-American audience, besides indicating disinvestment by European actors in the MOOC market, may also lead to a monopolization of the MOOC market by the big three providers (Coursera, edX, FutureLearn) (Shah, 2020). With the exception of Future Learn, which can be likened to the North-American model, the emerging pattern for Europe is the diffusion of MOOC initiatives among many institutions and many MOOC providers. Moreover, European experiences highlight a preference of HE institutions for running MOOCs on their own platforms, as opposed to out-sourcing the provision of MOOCs to external platforms, as in the case of Coursera or edX. This results in a plurality of solutions in the provision of MOOCs whereby a couple of pan-European MOOC aggregators (OpenupEd, MOOC Consortium) are flanked by a plurality of country-level initiatives following different approaches according to different degrees of involvement of governmental institutions. The positive side of this arrangement for the supply of MOOCs is a much greater diversity of courses

available to learners in terms of language, subjects, pedagogical approaches, and business models. The shortcoming may be a certain degree of confusion and difficulty of users in orienting oneself among such a scattered supply sometimes fragmented into small and loosely coordinated initiatives.

Therefore, whilst making forecasts in regard to MOOCs is risky, the near future seems to be characterized by the coexistence of many MOOCs. On the one hand, mainstream commercial platforms such as Coursera, edX, and Future Learn will continue to attract the majority of learners and courses worldwide, leading to a growing concentration of supply targeted especially on professionals and their need for continuous vocational development. On the other hand, a lively ecosystem of less market-oriented platforms, either public or mixed, consisting of single universities or consortia of universities and governmental institutions, will continue to focus on learning experimentation and on preserving the original values of the Open Education Movement. Against this background, universities are still safe. In both the EU and the USA, the integration of MOOCs into the HE system did not happen, and even the recent push towards micro-credentials does not seem to have interfered with the sector of formal education. The two markets do not overlap and instead, remain complementary or even increase the number of students on campus courses (Galil, 2018; Jacqmin, 2018).

## 9.2 For many…but not for all

The second part of the book addressed the "upstream side" of the MOOC experience: by which is meant the motivations that induce a person to surf the web and enrol on a MOOC, and the learning path that individuals with different socio-economic characteristics experience (from intention, through engagement in, to completion – or not – of MOOCs).

MOOCs were initially marketed as a technology-driven solution to the longstanding problems of inequalities of access to education. Indeed, the lower costs and minor barriers to access compared to those of formal education should have been key enabling factors that – in principle – incentivized enrolment, persistence, and completion by less advantaged groups. Even recently, when expectations in this regard have diminished, during the Covid-19 pandemic MOOCs have still been promoted as affordable substitutes for the lack of in-presence teaching. However, the growing body of studies on patterns of access to MOOCs has revealed that the very same patterns and mechanisms identified by the literature on inequalities of opportunities in access to higher education are replicated in MOOCs. Individuals with weaker socio-economic backgrounds – who were originally thought to be the target population – access these resources less than their advantaged peers; and when they do so, they are less likely to complete the courses with a certificate (whose labour-market value remains uncertain). Therefore, these studies provide support for downsizing expectations about MOOCs from their supposed democratizing power to a much lower-profile

focus on lifelong learning and training. What literature left unexplored (or underexplored) is that some particular categories, such as individuals who are unemployed or do not have support for training, may nonetheless gain some benefits from the availability of MOOCs. Moreover, there is still scant qualitative research on the individual mechanisms and meanings behind the actual behaviours and strategies of learners, so that a substantial part of the MOOC experience remains unexplored.

Overall, the findings of the book are consistent with the patterns isolated by the previous empirical literature. But they also contribute to blurring the boundaries of previously strictly defined patterns of motivations and completion. In particular, the findings reveal an active role of some particular groups of learners in shaping their own strategies for MOOCs.

As regards *motivations*, multiple reasons to do with work, education, and personal life coexist in the choice of enrolling on a MOOC. This plurality of strategies emerges clearly from the qualitative findings which identified four main groups of learners:

a employed individuals who used MOOCs to address contingent work-related needs, albeit with different degrees of pressure according to the level of competition that characterized their labour market (higher in the USA and in the tech sector, lower in the European countries);
b employed or unemployed individuals who used MOOCs (also in combination with other resources) to make a career change in order to obtain more rewarding opportunities or to exit vicious cycles of low pay and low-quality work;
c employed individuals who mixed professional and personal motivations to enrol on MOOCs, did not have an impelling career or job-related motivations but nonetheless kept themselves trained and updated in multiple fields;
d students who used MOOCs as additional and cheap tutoring resources while studying, so that they could deal with difficult exams, or as previews of future academic courses.

The quantitative analyses stressed the prevalence of an instrumental and compensatory role attributed to MOOCs by learners who perceived themselves to be weak in the labour market. With the overall objective of strengthening their prospective labour market chances, learners who were unemployed or lacked work experience (like students) tended to invest in a wide array of skills, including language skills, that may not have the same perceived labour-market potential as, e.g. a statistics course, but are transversal competences functional to numerous industries. This instrumental rationality oriented to increasing the level and quality of skills and improving future career prospects is also observed among employed learners. However, for them, the horizon of motivations seems to be mainly centered on the relevance of the skills to contingent needs and current job positions.

As regards patterns of *engagement, completion, and dropping out*, the quantitative analyses confirmed that learners with different socio-economic characteristics may attribute different uses to the courses considered. But they also showed that individuals with a better socio-economic status (derived from the higher cultural and cognitive skills associated with their levels of education) are more likely to stay engaged and complete the course with a certificate.

Indeed, the greater likelihood of completion and engagement for learners with high educational qualifications (at the graduate level such as a Master's or PhD) in the Statistics course largely confirms the relative advantage of learners with a higher socio-economic status. They are likely to start with more developed specific skills on the subject and also have better soft skills from their education that make it easier for them to study the topic. Moreover, their higher cultural and cognitive skills represent an advantage also with respect to virtual interaction during the course: they are more confident and more prone to interact in the online discussion forums, ultimately further advantaging themselves in the learning process through a typical 'Matthew effect' (Merton, 1968). However, an unexpected finding is the greater chances of course completion by unemployed learners, which further supports the idea of a strategic and instrumental role attributed to MOOCs by some groups of learners. In fact, unemployed individuals, in a disadvantaged labour-market situation, may rationally decide to complete the course and attain a certificate in order to improve their employment opportunities, based on the expectation that prospective employers may appreciate this as a signal of their competences and willingness to reskill (or upskill). To use the terminology of Max Weber's theory of social action (Weber, [1922] 1978), unemployed learners pursue a 'goal rational' type of social action in which the learner is able to understand the means necessary to achieve the goal, is aware of the consequences (and risks), and acts accordingly. This strategic approach seems not to be applied to all kinds of courses, but apparently only to those with greater importance or applicability in the labour market such as Statistical Learning.

Second, since their inception, the high *dropout rates* of MOOCs have been a critical issue. The qualitative analysis – though not strictly focused on dropouts alone – provided a more composite account of this critical issue. The first important result is that all the interviewees were at the same time completers of some courses and dropouts from others. Therefore, rather than being interpreted with the classic distinction between *completers* and *dropouts*, the behaviour of MOOC learners exhibits a dichotomy between an *active or passive* attitude towards the course. Consistently with previous findings, learners tended to complete the courses that might have direct applicability in their career, or for which they wanted to exhibit a certificate of completion (e.g. to be put on social media). But also their decision not to complete was part of a strategy in which they actively selected the parts of the course that might be useful for their career (professional or educational)

while discarding those modules that they considered not useful or not of good quality. The stories told by the learners interviewed depicted a context in which they actively made conscious choices and took deliberate action, also in the awareness of an experimental dimension of MOOCs which allows learners to try and test in a low-risk environment. The outcome of the decision to stop studying the course materials, coded in the quantitative data univocally as "dropping out", actually hid multiple meanings and reasons. It may be the result of an active process of selection by the learner ("cherry-picking strategy"), or it may be the consequence of real difficulties in understanding the course content due to a lack of cognitive skills, or difficulties in organizing work and study time due to a lack of soft and organizational skills ("outright dropping out").

All these findings highlight a crucial issue that characterizes both the upstream and downstream part of the MOOC experience: the critical importance of individuals' own resources. Indeed, the decision-making process that leads to enrolment on a MOOC reveals that when learners subscribe for a MOOC, they have already evaluated their situation, reflected on their weaknesses and gaps – both professional and educational – identified what may be a possible solution (e.g. the MOOC), and decided how and where to achieve that solution. Therefore, they have clear strategies in mind, strategies shaped by their own perceptions and experience of the structure of incentives and constraints of the labour market, but also formulated on the basis of their own endowment of cognitive, meta-cognitive, and soft skills. Hence, the "active pattern" is not within everyone's reach: it requires a set of good cognitive skills with which to understand the content of the courses, but also the ability to identify one's needs, the capacity to search for and select the right resources in a multitude of online courses, good internet skills, and, last but not least, a good stock of soft skills which enable the learner to organize the study materials in an efficient manner. However, these skills do not appear by chance; rather, they are closely correlated with previous educational experiences and are further expanded by professional experience, particularly in highly-qualified jobs (Balcar, 2014).

Therefore, the active strategy towards MOOCs seems well suited to the upper segment of smart and dedicated students or professionals, who start from a high level of cognitive and soft skills which enable them to devise a consistent MOOC-attendance strategy in line with their goals and their means, ultimately enabling them not to get lost along the way.

## 9.3 Don't think it is a silver bullet…

The third part of the book focused on the 'downstream side' of MOOCs in order to investigate whether learners ultimately benefit from having enrolled on a MOOC and what types of returns are most common. Advocates of MOOCs have automatically assumed positive effects on the occupational prospects of workers. They have stressed the ease of access, the flexibility,

and the limited cost of such resources. However, empirical research has not yet fully grasped the extent to which learners perceive attendance on a MOOC as beneficial, how the potential benefits in terms of professional and career opportunities may vary among learners, and through what mechanisms such a positive effect may unfold. By bridging the disciplinary constraints that have hitherto prevented a compelling understanding of the MOOC phenomenon, the findings of this part of the book highlighted that labour-market returns to MOOCs can be fruitfully interpreted in the framework of the same mechanisms by which education and training are rewarded on the labour market. Indeed, the dynamics observed with respect to the returns to formal education and lifelong learning tend to be replicated in the context of MOOCs. Moreover, as in the case of education and training, the returns to MOOCs cannot be analyzed without considering the institutional context of the labour-market regulation, the education and training regime, and the occupational structure of the countries where learners live.

With this general framework in mind, the analysis of the qualitative material gathered from MOOC students in the USA and Europe has highlighted several types of returns, as well as diverse strategies that learners associate with MOOCs.

On the *positive side*, it is true that attending a MOOC contributes to the acquisition of new skills, both ones specific to the job and transversal soft skills. Therefore, learners often target MOOCs to improve or diversify their skill sets, consistently with the hypothesis of the human capital theory (Becker, 1964) by which the additional education and training acquired through MOOCs is rewarded in the labour market insofar as it enhances the productive skills of the worker. Second, MOOCs may also generate positive returns in terms of career prospects, since learners may use these courses to distinguish themselves from other competitors, signaling their goodwill and motivation, as well as their proactivity and ability to learn, consistently with the signaling and screening theory (Arrow, 1973; Spence, 1973). Third, besides the economic and professional returns that may derive from MOOCs, some interviewees also reported an exploratory and experimental dimension of MOOCs. In this regard, MOOCs represented an opportunity for learners to experiment in a low-risk environment, test their abilities and challenge themselves, or open their minds with new knowledge opportunities, without fearing instructor's blame, social pressure from peers or ones based on gender stereotypes. For some interviewees, MOOCs represented a form of escape from routine jobs or social and spatial isolation, helped learners to cope with transition periods which required moving to a new country or making new family arrangements, and in some cases even contributed to expanding social capital through the arrangement of local study groups.

However, the *negative side* is that these returns are not within everyone's reach. Firstly, substantial self-selection issues emerge with respect to who can benefit from the skills acquisition. As seen above, those learners who are able to benefit from the skills acquired in MOOCs are again individuals who

already have a high level of education, good individual resources in terms of motivation, organizational resources, and a learning-oriented and proactive attitude, which enable them to identify strengths and weaknesses and build a consistent training path. Moreover, the knowledge acquired through MOOCs is only complementary to, and never substitutive for, the formal (and generally higher) education that interviewees had already acquired in the past.

Therefore, in the future, the spread of MOOCs may give rise to new areas of potential discrimination. Besides the self-selection issues mentioned above, the strategic use of MOOCs by learners to complement and update their skill sets may prove ambivalent for learners themselves. Indeed, whilst it is true that MOOCs signal the goodwill and proactivity of the worker, who can acquire additional skills at no or low cost, their spread seems to contribute further to a growing trend of individualization of the responsibility for training. Indeed, although MOOCs do not entail high monetary costs of entry, their popularity may promote and legitimize a shift of responsibility for (and burden of) training from the employer to the employees, who train themselves at their own expense and outside working hours. The consequences for the work-life balance of this use of MOOCs may be an additional cost for and discrimination against female workers, who often experience the double burden of family and work duties. Such factors may also shape MOOCs as high-risk investments for learners who do not have a good endowment of organizational and motivational resources.

Lastly, the ambiguous nature of MOOCs between formal and informal, and their lack of the legitimacy of recognized accredited institutions, explicitly qualify them as an inferior type of lifelong learning, inferior to traditional education, and even inferior to accredited training courses. The decision to avoid mentioning the origin of the skills acquired for fear of devaluing or discrediting the learners' commitment indirectly shows the persistence of social closure mechanisms (Collins, 1979). Despite initial claims that MOOC certificates equalize access to education, the perceptions of learners instead confirm that the MOOC phenomenon (re)establishes a hierarchy of prestige of educational qualifications consistent with mechanisms of social closure. Moreover, the status and attractive power of a handful of globally recognized elite universities are further reinforced by the MOOC phenomenon, pointing to the reproduction – rather than bypassing – of the typical social closure mechanisms observed for formal educational credentials.

Finally, the *comparative analysis* highlighted that the mechanism of reward works differently in the two labour markets considered. *In the USA* learners tend to report more frequently the importance of MOOCs for the acquisition of productive skills and human capital. In fact – given the occupational structure that characterizes the USA, the relatively low level of regulation of access to professions, and the low level of employment protection legislation (compared to most European countries) – it is reasonable to expect that MOOCs are more rewarded in the US labour market through

human capital and signaling mechanisms, while the level of actual skills tested on the job by-passes formal requirements of educational credentials, reducing the impact of social closure mechanisms. Indeed, the interviews depicted a situation in which learners were under pressure to invest in their human capital throughout their life courses in order to remain competitive in the labour market, suggesting that nobody "feels safe" in such a labour market. In a highly competitive, but also mobile, labour market rewarding actual competences on the job – particularly in the tech sector – medium-to-high qualified employees perceive the need to keep themselves updated, responsive, and "viable" in the labour market in order to deal with any possible future risk, but also to grasp future opportunities.

The prevalence of human capital mechanisms of reward also emerges from the importance given to what the employee can concretely do during job interviews or interactions at work. This appears particularly true in the tech sector, where learners – though an upward selected segment of them – seem indeed able to accumulate new skills through MOOCs. These skills contribute to increasing their productivity – as assumed by the human capital theory – and ultimately concur in preserving learners' comparative advantage in a highly attractive as well as rapidly evolving sector. Moreover, the importance attributed to personal portfolios by learners in the tech sector is indicative of a lower pressure for social closure mechanisms in which actual skills may bypass formal requirements of educational credentials.

The findings for *European learners* instead depict a situation in which the prevalent reward mechanisms of MOOCs are those of social closure and signaling, consistently with the overall institutional framework. Europe, despite profound country-level differences, when compared to the USA, is characterized by regulated and protected labour markets as well as highly standardized and regulated higher education systems (e.g. through the European Higher Education Area and the legal value of university degrees). Consistently, also for the European learners interviewed, MOOCs were attractive for career, job, or educational purposes, but the choices reported were more varied. European interviewees stressed the secondary role and lower status of MOOCs with respect to formal education and other forms of training, thereby confirming the persistence of social closure mechanisms based on the requirement of accredited licenses and qualifications. These factors also contributed to a lower incidence of mechanisms associated with the human capital hypothesis (at least compared to what was observed for the USA), while signaling strategies pursued by learners tend to prevail. Indeed, in countries characterized by general education (like Spain, where many interviewees lived), job-specific skills tend to be acquired through on-the-job training and experience, and employers tend to rely on extra signs of productivity and employability of candidates beyond education. Not surprisingly, therefore, European learners prevalently tend to use MOOCs to signal their pro-activity, motivation, and ability to train themselves, thereby sending an indirect message to employers and distinguishing themselves

from other competitors in the jobs queue, according to the 'education as a positional good' mechanism. However, the lack of accreditation of MOOCs as proper educational credits weakens their potential to be recognized as educational credentials, and it instead reinforces mechanisms of social closure based on the requirement of accredited licenses and qualifications.

## 9.4 Policy implications

Ultimately, MOOCs seem to reproduce the same patterns of inequality of educational opportunities as already analyzed for formal education as well as for adult and lifelong learning (Bernardi & Ballarino, 2016; Blossfeld et al., 2014; Shavit et al., 2007; Shavit & Blossfeld, 1993). Notwithstanding the slogans of mainstream MOOC providers, the majority of MOOCs are not able to reach the segment of middle- to low-educated workers, marginal workers, and not all unemployed individuals. However, this does not mean that MOOCs should be discarded, since some groups (corresponding to millions of people in absolute terms) can concretely take advantage of MOOCs. As this book demonstrates, an upward selected segment of the population can indeed succeed in, and gain benefits from, MOOCs: highly-qualified professionals, not only in the tech sector but also teachers and employees in the public sector, as well as smart and proactive students. For these learners, MOOCs are an easy-to-reach, low-cost, low-risk, as well as effective resources that help them satisfy contingent needs or support them in transition periods. MOOCs are attractive to various types of learners because they prove to be a useful, practical, and convenient solution for many of them … although not for all.

Therefore, putting aside the hyperbolic claims of easy and technological-based solutions to the problems of access to education and training, the time is ripe for moving the conversation on MOOCs to a more pragmatic level; a pragmatic level which comprises the overall potentials and shortcomings of a complex phenomenon which, like it or not, is here to stay as the recent resurgence of MOOCs during the COVID-19 pandemic has demonstrated. This does not mean lowering the level of attention of a "critical platform gaze" (Decuypere et al., 2021); rather, it means complexifying the discussion also by extending consideration of the phenomenon to the entire articulated and dynamic world of MOOCs, beyond mainstream platforms alone.

From a public policy standpoint, this book suggests that investing in MOOCs alone and outsourcing this responsibility to private for-profit platforms risks being ineffective for disadvantaged individuals, whilst further widening the gap between highly-educated, highly-qualified individuals, well-endowed with their own soft skills, on the one hand, and the lower and marginal segment of both workers and students on the other. But this is not a trait of MOOCs alone: the same issue concerns public policies that simply incentivize a generic increase in the supply of lifelong learning and education. Multiplying a generic offer or incentivizing access to it may be

a common strategy, easy and convenient for short-term political purposes, but it proves ineffective if the real goal is to reach the segments of the population that are most in need.

Moreover, even though upward positively selected groups can benefit from MOOCs, the spread of such courses raises another crucial, broader challenge: a shift of responsibility to the individual. Indeed, relying more and more on tools like MOOCs for the re- and up-skilling of workers is an additional step in the direction of moving the burden of training from employers or other collective actors (e.g. trade unions or professional associations) to individuals alone. This trend of slowly replacing collective responsibilities with individuals' responsibility for their own development has been ongoing since the early 2000s, as evidenced by the terminological shift from "education and training" to (lifelong) "learning". But this trend is growing further in the context of the Fourth Industrial Revolution, and its stress on the upskilling of the labour force. Not only the spread of MOOCs but also the public and private support given to MOOCs for lifelong learning is indicative of a growing process of individualization of risks and responsibilities which sees individuals as increasingly responsible (if not obligated) to provide for their own accumulation of knowledge and competences along the life course (Daniele, 2017; Lodigiani, 2020; Milana, 2012).

Last but not least, this book has (hopefully) provided a comprehensive analysis of the MOOC phenomenon in the USA and in Europe. But it has left unexplored some other aspects that can further extend the understanding of this phenomenon.

First, the composition of the samples, both quantitative and qualitative, was skewed towards high-profile learners. As we know from the literature, highly-educated and highly-qualified learners are numerically more present among MOOC registered users. Moreover, high-performing learners tend to be more willing to participate in surveys or to tell their stories in follow-up steps of the research. This represents a challenging avenue of research for the future: despite a series of research projects that have focused on particularly disadvantaged groups (e.g. refugees), the niche of low- to medium-educated individuals in the labour force remains largely unexplored. The analyses presented in this book were not fully able to grasp the standpoint of medium-to-low educated learners, marginal workers, and other socially-disadvantaged groups. Nonetheless, research that focuses on this segment of learners can provide important insights and practical policy advice on where MOOCs may still exhibit substantial improvement.

Second, the attitudes and predispositions of employers towards MOOCs are still under-investigated but promising areas of inquiry. Accordingly, investigating the degree of support of employers to MOOCs but also the actual practices enacted during the recruitment and promotion of workers may contribute significantly to understanding and forecasting the next evolution of MOOCs.

Finally, this book has explored the phenomenon of MOOCs in only one section of the Western world, the USA and Europe. However, MOOCs are emerging as a dynamic reality in many countries worldwide, in particular in the Global South and Asia. Not only do countries like India, China, Thailand, and Vietnam record remarkable growth figures, but also part of this growth relies on alternative approaches and models of MOOCs which are worth investigating (Bonk et al., 2015; King et al., 2018; Zhang et al., 2019; Zheng et al., 2018).

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