

MOOCs within Higher Education Lead to an Aggravation of Educational Inequality in China

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Abstract: In China, where education is often viewed as a scarce resource, the fairness of its production and distribution is crucial for social development. While Massive Open Online Courses (MOOCs) are widely promoted as a solution to bridge the educational gap and increase accessibility in higher education, this thesis challenges this optimistic view. It argues that MOOCs do not fundamentally lead to a more equitable production and distribution of educational resources. Contrary to prevailing narratives, there is a lack of evidence proving that MOOCs do not exacerbate existing educational inequalities in China. To support this argument, the study first defines key concepts of MOOCs and educational inequity. It then employs a dual theoretical framework: utilizing Marxist thought to analyze how inequality is embedded in the content of MOOC courses themselves, and drawing on Bourdieu's theory of capital to demonstrate how capital influences the unfair distribution of these educational resources.

Keywords: MOOC (Massive Open Online Courses), Educational Inequity, China, Higher Education, Marxist Theory, Bourdieuan Capital, Resource Distribution.

1. Introduction

As China is a populous country, education is often regarded as a resource that few people can afford. Besides, the major factor affecting social development is how fair the production and distribution of education is. It shows that MOOC, a new notion related to web-based education, is expected to compensate for the scarcity of education resources, which makes higher education more accessible to Chinese, and thus educational gap has narrowed (Trehan et al., 2017). As it is a rising notion, an exploration is worth to be undertaken (Moe, 2016). MOOC's advantages have been welcomed widely before critical comments on it (Moe, 2016). More Chinese are waited to receive an education so that a better educational program is imperative to be put forward (Koller, 2012). Accordingly, MOOC operates beyond the limitations of space and distance, and students can participate in their classes without the confinement of the classroom (Qi, 2019). This thesis does not think that online education can make educational resources to be produced and distributed more equally and widely in a fundamental way. There is no concrete evidence that shows that MOOC does not lead to an aggravation of Chinese educational inequality. This thesis is first to introduce some relevant concepts, which are MOOCs and education inequity. Secondly, on the basis of Marxist thought on education and social class, this thesis mainly analyses unequal content to be produced/provided by MOOC in its higher education courses. Finally, according to Bourdieu's types of capital, the influence of capital authority on the unfair distribution of educational resources is demonstrated (Bourdieu & Richardson, 1986).

2. Issue

Massive Open Online Course (MOOC), a kind of online course, is designed to make people's participation limitless and be accessed openly via Internet (Kaplan and Haenlein 2016). In fact, many MOOC companies, for example,

Coursera, edX, and Udacity, became more money-oriented, as well as the business model around MOOC experienced upgrading from 2015 to 2016 (Shah, 2016). With this context, MOOC's brand has not been so open as before. MOOC has won a large Chinese market since 2013 (Lingfeng 2020), and China caught up with this tendency. On the one hand, China has built a cooperative relationship with some MOOC platforms around the world, such as Coursera, edX, and FutureLearn. On the other hand, the Chinese online educational platform has also been developed. In May 2016, a total of 2.7 million students had been attracted by a massive open online course and hybrid learning portal from China, XuetangX (Lingfeng, 2020). By the end of 2016, nearly 400 courses had been provided, and over 6 million registrations had been achieved worldwide, which is the third-largest online course supplier except for Coursera and edX (Shah, 2016). Its capability to make Chinese education more equal is still a question to be probed, even if MOOC within higher education is developing in China.

3. Problem and How it Related to Justice

Education as a power to shape and produce individuals, changes with the advancement of history and society are with class attributes. Those who control education determine its purpose (Archer, 1984), and they do not aim at the free development of the individual. China is in the incipient stage of socialism currently. From one viewpoint, following the market economy, the instructive asset is designated in an unexpected way, for instance, distributed resources are different between urban and rustic areas and provincial disparities (Golley and Kong, 2018). It is also true for educational opportunities and quality for different social classes. The richer they are, the higher the quality education they enjoy, and the more comprehensive improvement they get. On the other hand, the production of resources is different in different areas, involving the content and pedagogy of

education. Also, there is a specific preference in its evaluation system, which is more appropriate for a group with specific characteristics. As to autonomous admissions, their contents are a benefit for urban and rich families, whereas rural and ordinary families lack cultural and economic capitals equivalence to what autonomous admissions require. Since individuals fail to achieve comprehensive and free development in society, education equity can be applied to eliminate this gap and create an enabling environment in which individuals can achieve their comprehensive and free improvement.

4. Model of Justice

According to Rawls (1971, pp7), "the primary subject of justice is the basic structure of society, or more exactly, the way in which the major social institutions distribute fundamental rights and duties and determine the division of advantages from social cooperation." He put forward two principles of fairness: the first is that keeping equal in the distribution of assignment on basic rights and duties, the second is that the inequality of the society and economies, including inequity of wealth and authority, are allowed only if this inequity is a benefit for everyone, especially the underprivileged group (Rawls, 1971). Therefore, the core of unfairness is distribution justice in this essay.

4.1. Marx

As the power to shape and produce people, education is characterized by class nature and changes along with the development of history and society. The goals of education are pursued by those who control it (Archer, 1984), but they do not attach importance to individuals' free development. In a capitalist society, the rulers take advantage of education to make people obey the rules of the bourgeoisie, so that they can achieve a better capital appreciation. Based on the influence of school education, the individual division of labour can completely conform to the production needs of the capitalist society, and the public becomes the machine parts with distinct class characteristics. What is worse, with the further development of labour division specialization and mechanical automation, in addition to the few technical elites, most of the proletarians of intellectual education are unnecessary (Sitton, 2010). Even for the assembly-line workers and civilian personnel in the factory or office sector, they need to complete repetitive and straightforward works, and even the individuals who have received more intellectual education are not able to obtain a higher labour wage than those who did not receive the intellectual education. In this case, knowledge and education will gradually be owned by a few people. The majority of the proletariat does not have the initiative to receive more intellectual education (Anyon, 2008). The reason might be that, on the one hand, they are faced with tedious and busywork. While on the other hand, this kind of education will not improve their economic situation.

First of all, the unfairness in school educational resources is manifested in the class nature of educational content. According to Marx stated in the "Communist Manifesto" that the education of the bourgeoisie for fear of its demise is for most people only to train people into machines (Sitton, 2010). The educational content should promote students' all-round development of morality, intelligence, physique, and aesthetics, allowing them to have a healthy body and independent thinking ability and develop their own hobbies

freely (Anyon et al., 2011). However, in a class society, the educational content is partial, but not for all the people, because people are told to obey the class rule. On the one hand, the class nature of this educational content is reflected in the indoctrination of ideology, and on the other hand, the textbook's content teaches people to obey the ruling class and numb their ideas.

Moreover, the class nature of education is reflected in the one-sidedness and the lack of educational content. In the educational process, the ruling class values and popularizes the content, which is conducive to capital proliferation. However, there is a lack of content that is not conducive to capital proliferation and even inspires people to think independently and resist oppression (Anyon et al., 2011). That is, many of the educational content produced tends to partially satisfy people's needs, which might lead to the public need not being included in a wide array of current educational content, but only what a few people need. It seems that there are a wide variety of sufficient educational resources, but they actually can not meet the objective needs of different people. The content of offline education is the same as that of online education. Thus, class characteristics limit educational content as well.

The unfairness in school educational resources results in the differences in the teaching process and educational environment, which is manifested particularly evident in the teaching requirements and cultural barriers to the disadvantaged groups. A study on social class and school knowledge shows that although the curriculum themes and materials of schools in different classes are similar, there are still differences in the teaching process and educational environment of the course. For example, working-class schools lay more emphasis on the process of executing procedures, however, without not only explaining the purpose behind them but also paying attention to students' thinking processes and decision-making. Compared with working-class schools, middle-class schools and their surrounding environment are superior, where more attention is paid to guiding students' understanding of meaning in the teaching process. Apart from that, the affluent professional school's environment places more emphasis on fostering creativity, hoping that students can learn from experience and thinking. Moreover, elite executive schools focus on developing students' logical and rational thinking, creating an environment contributing to solving problems, and manipulating hypothetical variables to address problems (Anyon, 2008).

4.1.1. Inequity in the Production of MOOCs

The subjects and contents of online higher education are limited (Zhang, 2013). That is on the grounds that only part of courses within higher education are given by most MOOCs, for example, Udacity, Coursera, and edX, and the "School Online" foundation of Tsinghua University. Additionally, the majority of the courses focusing on experts and students, which causes the types of audiences are in a restriction (Schuwer et al., 2015). For instance, farmers have no access to them. Accordingly, the most transmitted information is probably going to be invalid to the common labourers, which implies these efficient educated groups may be restricted by restricted educational products. This can only fulfill a few students and elites rather than farmers or workers. In terms of the requirements, these online education products are ineffective and insufficient for the working class.

In addition, with the advancement of information

technology, knowledge can be recovered as information on the Internet for dissemination. Whereas, education can not only be verified by multimedia, for example, text and pictures, but also it tends to be communicated and educated without concrete objects, for instance, hidden curriculum, moral education and so on (Schiro, 2013), which are also indispensable contents of education. If online education replaces offline education, it is unjust for those who lack hidden curriculum and moral education.

The educational content and the environment for students to attend online courses are similar (Haber, 2019). For instance, the instructional video they use, the practice they test, the online education resources they read from the course are all the same, and they also discuss in the same community. The majority of this kind of online education environment might be the same. However, the same online education does not guarantee that all the individuals are equal, and the development of an individual can be achieved. First of all, online education is distinctive with video education or text education, which has a complete education system, and offline supplementary teaching and interaction processes can also be included (Li et al., 2017). During this procedure, various groups are probably to be presented to various conditions. For those who get an offline higher education, a series of offline teaching and tutoring links are often equipped with online higher education. However, those who are outside school might have a lack of the design of this process, which further leading to a discrepancy in the academic performance of the two groups (Harel Ben-Shahar, 2016).

Secondly, despite the fact that there is no significant distinction between online resources, there is no evidence showing that education between them is equal (Gaisch & Jadin, 2014). The requirements of individuals' development are different (Haber, 2019). Even if sufficient educational content in online higher education has been provided to students, compared with traditional offline courses, there are still numerous slacks and insufficiencies in online higher education in terms of giving feedback and requirements to students. The single form of educational resources is not helpful for personal diversity (Bettinger et al., 2017).

4.2. Bourdieu

Bourdieu (2018) focuses on the importance of social, cultural, and economic factors that lead to inequality in education. He believes that capital usually comes in three primary forms. First, economic capital includes capital that can be legally converted into cash and capital that can be systematically converted into property rights, and that can be directly converted into cash. Second, social capital, which means information, talents, and types of instructions, any individual can have a higher status in public, including higher demands on others. Guardians who give children social capital can transform their training environment into a comfortable and familiar place and make it easier for them to succeed through this attitude and knowledge. For example, to figure out how to play musical instruments, aesthetic abilities, art, music, traveling knowledge, and speaking in an "accent" with social value. Thirdly, social capital is "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu, 2018, p. 248).

As online higher education is melded with traditional teaching, there are massive challenges involving the

availability of economics, cultural, and social capital in the allocation of education resources in online classrooms (Hong & Zhao, 2015), which are presented in the "digital divide" during the allocational process of education resources (Castaño-Muñoz et al., 2017). The "digital divide" refers to the gap between the privileged and the needy in resource allocation (Fest, 2001), which poses severe threats to the comprehensive educational equality among various people.

4.2.1. Economic Threshold in the Distribution

Admittedly, remote learning lessens the cost of the knowledge dissemination and reduces the financial pressure for the recipient (Haber, 2019), which does not follow those massive individuals can gain the benefits due to the existing threshold of online teaching (Jacoby, 2014; Hew and Cheung 2014), for example, remote learning relies heavily on hardware facilities, which arises out of the local economic and technological environment along with an individual financial circumstance. On the one hand, online learning functions with the assistance of electronic products and faster Internet speed; On the other hand, Local government should upgrade the network facilities, including electricity and networks, broadband, etc. From the perspective of Individuals, those with higher education can get access to online courses, while the underprivileged in the society are unlikely to afford the cost of corresponding hardware facilities. A survey demonstrated that (Home Broadband 2015, 2020), by the end of 2015, the households with the annual income less than \$ 20,000 in the United States who are equipped with broadband networks accounted for just 41%, while there were over 80% households with annual income above \$ 50,000 who can get network service. In China, according to the China Statistical Yearbook 2015 (2020), by the end of 2014, almost 650 million people with access to the Internet across the country, which means still a large number of groups cannot surf the Internet.

As regard regions, there presents stark contrast among cities and villages in terms of network facilities and the condition of remote learning. The economic gap leads to the differences in broadband access between cities and villages. The quantity of urban family units with broadband is practically triple or fourfold that of rustic families. Also, according to the 37th Statistical Report on the Development of the Internet in China issued by the China Internet Network Information Center (CNNIC, 2020), for metropolises in China, including Beijing, Shanghai, and Guangdong, the Internet penetration rates generally constitute between 65% and 70%; In western regions such as Chongqing, Ningxia Internet penetration rates take up below 55%, while Internet penetration rates in Tibet and Henan are even under 45%.

4.2.2. Cultural Threshold in the Distribution

Online higher education is a production of knowledge and technology (Haber, 2019). Provided the vast majority of people do not have this knowledge and technology, there may be a soft threshold based on culture and skills. Therefore, when allocating educational resources, there are differences between individuals on both sides of the threshold. The cultural threshold in the distribution of network higher education is closely related to the limited content of online higher education in the production process. The reason is that the generated content is limited to specific majors and fields and is aimed primarily at specific target groups, it can be difficult for people outside that field to access, even though online education. For example, MOOC teaching is mainly aimed at college students and high-level intellectuals

(Schuwer et al., 2015). The content provided may be simple and clear to college students in the relevant field, but may not be suitable for those who do not have a relevant systematic learning experience and do not have a high level of education, which means there are still enormous difficulties and the dropout rate remains high as far as the data is shown (Ebben & Murphy, 2014). The original expression of the gap between school learners and those who cannot learn outside school may now be re-emerging in cyberspace. To be specific, people with higher cultural capital can master and absorb educational resources and use them more effectively. On the contrary, due to the limited content of online higher education and the limited personal investment, even if educational resources appear in an open and shared manner, people with lower cultural capital will still not benefit from the influence of former cultural capital (Mu, Dooley, Luke and Li, 2019). Therefore, achieving real "sharing" is nearly impossible.

Skill thresholds within the distribution process of online higher education can also be seen as individuals' cultural capital. Information technology-based skills are specifically crucial in online education (Burgos et al., 2019). The threshold of skills can be analyzed from hardware and software: From one point of view, it is the essential ability to use the Internet and relevant facilities, for example, the basic use of computers and the method to access the Internet; From another point of view, being able to use the Internet for learning autonomously and solving problems. Although there is no fixed line between the former and the latter, the emphasis is different. Hardware emphasizes the systematic learning of skills that can be acquired in short to medium term. Long-term education cannot bridge these gaps (Mu, Dooley, Luke, Zhao, et al., 2019). To take the primary use of computers as an example, although a person who has never been exposed to computing might master computer using skills after a short period of training because such a skill threshold is relatively easy to cross. However, the latter emphasizes the gap between individuals' understanding of the Internet, their familiarity with related fields, and their ability to use the Internet to solve problems, which may be due to long-term family environment and social education.

To summarize, for people who do not use computers very often, they can quickly get familiar with the basic operation of computers. However, it is challenging to solve problems in unfamiliar areas by using the Internet. The following thresholds can be more deeply rooted in different classes of people (Grenfell, 2014). In online education, people with a low skill threshold can solve problems efficiently because they have previously used information technology and are familiar with its field. People outside the skill threshold are challenging how to use educational resources effectively and turn them into productive forces.

4.2.3. Social Threshold in the Distribution

As for relationships between individuals, despite online education also concentrates the communication between students and teachers, who are classmates at the same time, for example, xMOOC and cMOOC (Zawacki-Richter, Bozkurt and Uthman Alturki, 2018), which both inspire the establishment of immense relationships. Such connections may not replace the influence of interpersonal relationships that changed traditional schooling. For instance, during the learning process, educators who are already in school may directly discuss with peers, give feedback to teachers, or even receive additional tutoring and training related to the course. However, students only in the network space are faced with

the problems of feedback lag and lack of offline resources (Zhang, 2013). As a result, their final grades are often lower than those of students in schools. (Law et al., 2013).

Judging from the social acceptance of MOOCs within higher education after graduation, the gap between off-school and in-school online education has not been narrowed (Ma and Lee, 2019). In the previous offline system, individual education achievement mainly depended on the school system training. They obtained social certification through transcripts and diplomas. Although current online education also takes the form of a diploma, it does not technically strictly guarantee the process and results of online education compared to the educators already in the school system (Driscoll, 2010). Most social enterprises do not recognize the existing diploma system. Compared with students inside the school, even those outside the school who have received the same education process through online education are at a disadvantage when it comes to job hunting and works.

The threshold of interpersonal relationships in online education reflects the difference between interpersonal relationships in reality. This social capital is not governed by technology but is formed by individuals in long-term social relationships. Compared with those who do not have the resources, the holders of the initial educational resources are in a favourable position to obtain the educational opportunities, and the threshold of interpersonal relationships may expand the gap between different degrees of educational outcomes (Goddard, 2003). Although online education is more widely used, it may not be as effective as traditional classroom education in narrowing the gap in educational outcomes created by barriers to social capital (Stanton-Salazar and Dornbusch, 1995).

5. Preference

Marx's capital theory is the basic source of Bourdieu's "cultural capital" thought. Marx focused elaborating on the core category of capital in "Capital." In detail, on the one hand, capital is not only an important means (commodity production and circulation) but also a source of capitalists' zealous pursuit of value proliferation. On the other hand, capital represents the value that can bring surplus value, reflecting the exploitation of social production relations between capitalists and workers. Moreover, there is an insurmountable difference in the status hierarchy between capitalists and workers. Marx's concept of "capital" is closely related to the capitalist system of exploitation (Fine, et al., 2016). The definition of capital is similar to that of Marx. However, creatively, Bourdieu categorizes capital as economic capital, cultural capital, and social capital, which are not connected with the exploitation theory against Marx. This is a major difference between it and Marx's concept of capital. At the same time, Bourdieu broke the tradition of Marxism and regarded culture as a form of capital, believing that it is unreasonable to interpret culture as a derivative of the economic superstructure, but an autonomous power resource (Grenfell, 2012).

Additionally, the concept of "cultural capital" calls for researchers to focus on shaping individuals through language, knowledge, and cultural styles (Richardson, 1986), to facilitate their understanding of facts based on their social background. In addition, differences are translated into academic achievements and unequal employment opportunities in MOOCs within HE. The concept of "cultural capital" may contribute scholars to carefully investigating

how students' academic achievements in MOOC are affected by their family cultural capital, and how schools' cultural resources exacerbate this effect, rather than merely blaming the gap on class differences. Bourdieu's theory of cultural capital is a critical inheritance of Marx's concept of capital, which is more specific than Marx's concept of capital. Therefore, the theoretical contribution of the concept of "cultural capital" cannot be underestimated.

Although educational opportunities have been expanded in a certain sense, inequality still exists. To explain how education accelerates social inequality, researchers have examined education from multiple angles to probe into its function. Among various inequality theories revealing education, Bourdieu's theory of educational reproduction plays a unique as well as indispensable position. In detail, from a cultural perspective, Bourdieu provides a new perspective on educational inequality. Even more, unlike a variety of researchers who simply emphasize economic and national political power, Bourdieu (2018) believed that the interaction among multiple factors is responsible for inequality in education, among which, the role of culture can not be ignored.

Furthermore, Bourdieu explained the reproduction function of education from a cultural perspective, pointing out that not only political and economic factors but also hidden cultural factors are responsible for inequality in education. To be specific, Bourdieu illustrated that children from different social classes had acquired unequal cultural capital due to different family backgrounds, thus developing disparate class habits. Even worse, although MOOC education ostensibly provides equal more choices, it actually exacerbates this inequality and legalizes this inequality. The essence of education is the production and reproduction of bourgeois culture, and social reproduction is achieved through cultural reproduction. Bourdieu's theory of educational reproduction provides us with a new perspective to probe into the inequality of education.

The most important is that China is in the primary stage of socialism. Compared with western capitalist countries, MOOCs are mostly public welfare undertakings in higher education. The reason which may lead to the gap in academic performance and employment is not only the class characteristic of MOOC teaching content production, but also the differences between online and offline teaching environments and teaching processes, and more importantly, the differences in the economic, cultural and social capital of students themselves.

6. Conclusion

In conclusion, this paper argues that MOOCs in higher education (massive open online courses) have increased educational inequity in China. Firstly, we discuss the definition of MOOC, educational inequality, and Rowls's definition of justice. Then, the inequality of production and distribution in education is considered, referring to the educational theory of Marx and the forms of capital from Bourdieu. Finally, there are some comparisons with these two theories on the subject. The purpose of this paper is to demonstrate that MOOCs in higher education, as a combination of new technology and traditional education, still have many problems to be solved in terms of educational equity, because educational equity is of great significance to China's sustainable development. However, it was not possible to cover all the latest research, and different theories

should be used to gain a more comprehensive understanding of the subject.

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