Survey and Reflection on MOOC Mania in China Higher Education

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Abstracts. After developing for several years, massive open online courses (MOOCs) have actually become compliments rather than competitors to traditional higher education. However, a series of questions have to be resolved for the deep fusion of MOOC into traditional higher education. Based on a survey of MOOCs development status in China higher education, some congenital defects of MOOCs, some attentions of the combining of MOOCs with higher education and the future tendency of MOOCs were discussed briefly, in order to make MOOCs sever the China higher education better.

Introduction

In the past few years, the number of the Massive Open Online Courses (MOOCs) offerings has increased exponentially since the first one was offered in the fall of 2011, due to the potential for drastically altering the landscape of higher education [1,2]. China higher education also joined in this global “tsunami” in 2013 [3]. Many top colleges of China, such as Tsinghua University, Peking University, Fudan University, Zhejiang University, Nanjing University and so on, developed their own MOOCs successively. It was considered that the MOOCs would lead to all-around changes from fundamental structure to decision-making and administration modes of higher education [4].

However, the developing speed of MOOCs is slowing down around the world, even though MOOCs have unique features of effective Technology-Enhanced Learning approach. More and more participants including many providers are eyeing MOOCs with skepticism [5]. In fact, MOOCs provide freely new opportunities to a massive number of participants to attend online courses without any entry requirements [6], which results in a very high drop-out rate of over 95% of course learners [7]. And now, the predicted replacement of traditional campuses by MOOCs does not appear.

After developing for several years, MOOCs have actually become compliments rather than competitors to traditional higher education [5]. Nonetheless, a series of questions have to be resolved for the deep fusion of MOOC into traditional higher education. Therefore, in this paper the development status of MOOCs of higher education in China, some congenital defects of MOOCs, some attentions of the combining of MOOCs with higher education and the future tendency of MOOCs were discussed briefly, in order to make MOOCs sever the China higher education better.

The Status of MOOCs of China Higher Education

Tsinghua University provided its first online course on EdX MOOC consortium launched by MIT partnered with Harvard in 2013 [8]. And in the same year, Tsinghua University constructed its own MOOC platform “XuetangX” which is the world’s first Chinese MOOC platform. Meanwhile, XuetangX was authorized to operate EdX courses in the Chinese mainland. Up to now, more than 280 free online courses are offered on XuetangX to the learners all over the world. However, the enrollments of over 90 percent MOOCs were less than 10,000, even the registered student numbers of more than 50 percent MOOCs were less than 1,000 [8]. Which contrasts sharply with the situation of Thrun’s first MOOC in 2011 and the hopes of the providers of MOOCs. A similar situation occurs in another important Chinese MOOC platform “icourse163”. 615 of MOOCs are provided on icourse163, but the enrollments of about two thirds of online courses are less than 10,000 [9].
On the other hand, more and more universities and colleges have launched their special MOOCs following the innovating trend. A lot of institutions have been eager to produce their own MOOCs rather than to use excellent MOOCs existing online. Unfortunately, few students registered for these courses. These MOOCs, in fact, are supplements of classrooms by showing video lectures in class. Sometimes these MOOCs appear in the form of “flipping classroom”, e.g. students watch video lectures at home and work through problem sets in class. In one word, the development of MOOCs of China higher education expands rapidly without desired results.

Some Defects of MOOCs

It should be noted that MOOCs offered new experiences to many participants. But many congenital defects of MOOC restrict its development as an independent education system, and some defects were discussed briefly below.

Skill Training

It is difficult for online courses to operate skill training for the learners, especially the clinical experiences of medical science and other experiment skills of nature sciences and engineering technologies. The one of the advantages of MOOCs is the convenience of online and offline interactive experiences, while one of the disadvantages is lack of the face to face communication which is crucial for the training and formation of practical skills. In other words, it is better for the formation of practical skills in live classes rather than on MOOCs. About 50 MOOCs about engineering technologies are offered on XuetangX, but almost all of them are basic theories while few courses are focus on skill training [8].

Educational Ethics

Generally, teacher-student and classmate relationships established basing on MOOCs are unhealthy. The fundamental and important ethic relations in education processes are teacher-student and classmate relationship which develop gradually by face-to-face communication. The learning manner of watching course videos online is lack of the face-to-face communication even the offers of MOOCs can interact for a short time with the learners online. Furthermore, the lack of good teacher-student and classmate relationships is adverse to the socialization of the people, although it is utilitarianism. As this point, MOOCs are more suitable as the supplementary of “brick and mortar classes”.

Organization Mode

The properties of MOOCs such as being easy to register, openness and low cost improve the learner’s enthusiasm, whereas the feathers of being lack of supervision and sense of ritual in live classes result in very high drop-out rate and very low pass rate. The facts were reported in many researches [5-7], though it is difficult to obtain accurate data of the drop-out rate and pass rate of MOOCs in China higher education at present. Additionally, the paradox between declared good learning effects against low pass rate cannot be explained well. Perhaps the participants of the MOOCs do not really needs the leaving certificates, and what they really care about are contents of the courses. Hence, the organization mode of MOOC is not enough to make it develop healthily.

Besides the defects mentioned above, the effect of fragmented learning mode in MOOCs on the systematization and logicalization of the knowledge should be given much more attention. Moreover, the cultural and ethnic diversity should be given more understanding and respect as the fusing of foreign MOOCs into local higher education.

Some Attentions about the Combining of MOOCs with Higher Education

In the current higher education system, some differences should not be ignored, e.g. the differences between liberal education and professional education, the differences between natural sciences and humanities and social sciences, and the differences between undergraduate education and graduate
The Differences between Liberal Education and Professional Education

The purpose of the liberal education is establishing general knowledge and value among diverse human, hence MOOCs have great advantages in the liberal education as their openness, free and fast propagation speed online. However, these advantages of MOOCs cannot work adequately in professional education, especially in the engineering technology education. The number of students enrolled in MOOCs can prove this phenomenon. The first two MOOCs with most participators on XuetangX are “An Overview of Tsinghua University Department” and “Scenery of Tsinghua University”, with about 210,000 of learners and 190,000 of learners respectively. Contrastingly, the enrollment of MOOC named “Distributed Computation and Data Management” is less than 700 [8].

The Differences between Natural Sciences and Humanities and Social Sciences

Generally, the courses of natural sciences embody logical evolution and interconnectedness, while the courses of humanities and social sciences have to keep openness, diversity and tolerance. And the MOOCs are more suitable for the latter because, in most cases, one MOOC is independent from each other. In fact, the ratio of the MOOCs about humanities and social sciences on XuetangX to the MOOCs about natural sciences and engineering technologies is around 5:3. Moreover, in the first ten MOOCs with most learners on XuetangX, the enrollment ratio of humanities and social sciences to natural sciences and engineering technologies is 10:1. Therefore, these differences must be paid a lot of attentions on in the design and development of MOOCs.

The Differences between Undergraduate Education and Graduate Education

The target audiences of MOOCs are undergraduates at present, but this learning mode is much fitter for graduates or peoples with some occupational skills [5]. It is because that graduates have more systematically required knowledge and better self-discipline. Thus irrational choice of MOOCs can be avoid well. It was reported that, in 2013, 44 percent of 34,779 students enrolled in U Penn MOOCs launched by the University of Pennsylvania already had completed some graduate education [10]. And according to a 2012 survey of Coursera launched by Andrew Ng and Daphne Koller of Stanford, 50 percent of the registrants were employed in fields related to their courses, and 20 percent were in graduate school [11]. It is foreseeable that MOOCs will play more important role in graduate education in spite of having no related data of MOOCs in XuetangX or icourse163.

Future Tendency of MOOCs

The contents concerned with undergraduate admissions and advanced placement program, cross-disciplines and emerging discipline, as well as graduate education are personally considered as the future tendency of the MOOCs.

Undergraduate Admissions and Advanced Placement Program

Nowadays, so many colleges and universities launch their own MOOCs even without satisfactory results. One of the important reasons is enhancing their influence and consequently it is in favor of undergraduate admissions. The MOOC titled “An Overview of Tsinghua University Department” on XuetangX belongs to this kind of course, the fact of 210,000 of participants proves the importance of this type courses. On the contrary, more than 130 colleges and universities partner to operate the MOOCs platform of icourse163, but few courses about undergraduate admissions are offered. It is harmful to the publicity of these colleges and universities. About 9 MOOCs on XuetangX and 28 MOOCs on icourse163 belong to the advanced placement program, which is too little to meet the actual demand of China higher education.

Cross-disciplines and Emerging Discipline

The diversity and openness of MOOCs facilitate the disciplines’ cross and promote the emergence
of new branch of science. In traditional higher education the disciplines develop systematically and completely, which delay their cross and the emergence of new subject. It is easy for the learners to understand different perspectives by watching lectures of the MOOCs with high qualities. This is benefit for the evolution of traditional disciplines and progress of emerging disciplines, which just is the value of MOOCs on the knowledge innovation.

Graduate Education

It is mention above that the target audiences of the MOOCs are undergraduates, whereas the actual audiences are often graduate students. Therefore, it is necessary and urgent to design and launch MOOCs aiming at the graduates. It is not only because the graduate education is the continuing of undergraduate education but also because the postgraduates are the main researchers of science and technology. In fact, the innovation of traditional disciplines and the emergence of new branch of science depend deeply on the creative researches of postgraduates.

Summary

Although MOOC is a kind of creative education mode, it cannot cure all maladies of higher education. When its defects are avoided well and its advantages are applied sufficiently, MOOC will serve better and better as complement of traditional higher education. And it is looked forward that MOOC can accelerate the innovation schedule of China higher education.

References