Empirical Study on MOOC Cognition Situation of College Students in China Southwest Border Areas

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ABSTRACT: Massive open online course (MOOC) is new development and breakthrough of open educational resources movement, besides the emergence of MOOC will bring enormous impact on higher education teaching mode, education quality, teaching philosophy and even the development direction of higher education. This research is based on 307 returned questionnaires, and has analyzed the cognition degree of MOOC and influence factor from the college students in China southwest border areas. The results have showed that, the overall satisfaction of school curriculum from interviewee is not high, but they have better sense of self-learning, when they thinks online courses cannot meet the learning needs, they will try to find network courses and other informal learning ways. Since access to obtain fresh information is restricted, the overall extent that the college students in China southwest border areas know MOOC is at lower level. Satisfaction of school curriculum has not formed significant effect on MOOC cognition. The learning initiative of learners is an important influence factor to urge interviewee to form positive cognition on MOOC.

1 INTRODUCTION

With the popularization of higher education, the proposal and development of lifelong education thought and other ideas, needs in higher education for people are increasing day by day. Under the condition of Internet technology, massive open online course (MOOC) begins to gradually penetrate into every field of society. In 2012, America top large-scale gradually sets up network learning platform, and provide free courses on the Internet. Then coursera, udacity, EDX three course providers begin to spring up, providing more students with the possibility of system learning. MOOCs has received an explosive growth since 2012, and attracted intensive attention from educational circles and business circles (Aguaded-Gomez, 2013, Lokey-Vega, 2014). On May 21st, 2014, Tsinghua University officially joined edX, becoming one of the first Asian university members of edX. Peking University announced joining edX in May at first, recently joined coursera, aims to seek and try diversified MOOCs platform, which is also suitable for a variety of learners, to better serve global Chinese.

Almost all the courses being produced as online open courses are the most popular in famous universities, and almost all the teachers are the best in this field (Daradoumis et al., 2013). This makes higher education no longer confined to respective separate institution of higher education, wherever the network connection exists, as long as the learners have learning willingness, they can listen to the knowledge teaching of top scholars from famous universities whenever and wherever. Therefore some scholars think, the emergence of MOOCs will be able to greatly lessen the educational gap between countries, regions and schools, to promote education equity, meanwhile bring great changes on the current higher education system, education mode, talent training process etc (Dillahunt et al., 2014, Wang, 2013).

The president of Tsinghua University Chen Jining thinks, MOOCs provide online education with brand new knowledge spreading mode and learning style. This is not only the innovation of educational technology, but more profoundly changes our higher education concept, education system, teaching method and so on. The emergence of MOOCs makes the position of teachers and students in traditional classroom generate disruptive changes (Li, 2014), and makes students really accept personalized learning guidance as well as have real option. As long as there is hope of promotion, one can receive the best Chinese college courses through network learning.
2 THE PROPOSAL OF QUESTION

Since MOOCs get large-scale popularization and application in 2012, the research about MOOCS is increasing day by day. The scholars in educational circles has conducted in-depth and extensive research on MOOCs from its curriculum paradigm, connotation, characteristic, concept and other aspects, but so far, the empirical studies on MOOCs in border areas universities are still very scarce. MOOCs have already emerged as an era, and have formed profound impact on world's higher education. Facing such development trend, as college students in China southwest border, what about understanding and cognition of this new thing? What are the key factors to influence their cognition?

This study intends to carry out research on the following problems:
① Under the condition that MOOC has been widely spread and applied, how about the cognition level of college students in China border areas? Whether have conducted independent MOOC curriculum?
② How about the cognition orientation on MOOC of college students in China's border area?
③ How about the cognition degree on MOOC of college students in China's border areas?
④ MOOC is considered to be best supplement form for formal learning, does it mean that the lower learning satisfaction on college curriculum, the more approval of depending on MOOC learning way?
⑤ Fifthly, MOOC is a typical informal learning mode, as long as the Internet access, learning can be carried out at any time. Therefore, will the learners with higher learning initiative more accept MOOC courses?

3 RESEARCH METHOD

3.1 Sampling Instruction

This study mainly investigates the comprehension degree, comprehension channel and the cognition attitude towards MOOC from the university students in China southwest border areas. 400 copies of survey questionnaire have been randomly distributed in a number of college campus in border areas, while returned questionnaires of 324 copies, effective questionnaires of 307 copies, the questionnaire recovery rate of 81%, the efficiency of the questionnaire 94.75%. The majors of the students filling out the questionnaire involve business administration, public administration, international politics, economics, law, editing, art, minority national sports, minority language and literature, electric technology and automation, physics, chemistry, information and computing science, mathematics, and information management etc. The attendance grades of students are distributed from freshman to college senior.

3.2 Questionnaire Design

This questionnaire has initially compiled 31 choice questions. To gather more information in limited length, three multiple choice questions have been designed, while the rest are single choice questions, with the attitude of adopting Likert scale. The title can be divided into four modules. The first module is from 1 to 4, which are used to know the interviewee’s basic situation (gender, grade and origin of student etc.); the second module is from 5 to 10, which is used to investigate the interviewee’s satisfaction towards college curriculum; the third module is from 11 to 21, which is used to investigate the interviewee’s learning initiative; the fourth module is from 20 to 31, which is used to investigate the interviewee’s cognition attitude and advantage understanding towards MOOC. Through initial expert review and small range of preliminary examination, remove the 18th, 19th, 30th and 31st questions, which lack identification.

4 RESULTS ANALYSIS

The results of this questionnaire survey use SPSS20 for data processing and analysis

4.1 Descriptive Statistical Analysis

307 copies of valid questionnaires from returned questionnaires show that, there are 102 boys among the students being interviewed, accounting for 33.2%, while 205 girls, accounting for 66.8%. In grade distribution, there are 36 freshman students, 74 sophomores, 137 junior students, and 60 senior students. There are 137 arts major students, accounting for about 44.6%, while 169 science major students, accounting for about 55.4%. From the distribution of student origin, 11.4% of interviewees come from the prefecture-level cities or municipalities, while 30.3% come from county-level cities / districts, 11.4% come from township, 46.9% come from rural areas.

4.2 Satisfaction degree analysis on school curriculum

According to survey results, the satisfaction degree towards school curriculum of the college students in border areas is not high overall, among which 70% of the interviewees think of himself not interested or general in school curriculum, only 30% of the interviewees indicate interest; from the practicability of school curriculum, up to 49.8% of the interviewees believe that the assistance of existing courses to find work in the future is just "general". When being asked "the course types offered by
school is rich, which can meet my learning needs", only 33.3% of the interviewees choose "Relatively Meet "and" Meet ", the remaining 66.7% indicate "General "and " Not Meet ", indicating that the satisfaction degree towards school curriculum rich degree of the interviewees is not high; for teachers teaching of school curriculum, 35% of interviewees feel satisfied, 50.2% of interviewees indicate "General", the remaining 14.8% express a certain degree of "Dissatisfaction". But even with the existence of these problems, 93.8% of interviewees still show that "They are able to seriously complete the learning of professional courses in school ".

4.3 Autonomous learning awareness analysis
For the students with high autonomic learning awareness, they often have the characteristics of effectively managing time, and will actively find additional learning channels, to achieve self-promotion and knowledge expansion.

Survey results show that, over 60% of the interviewees indicate that they like to arrange learning autonomously, and flexibly grasp learning time; 42% will develop formulate periodical learning plan according to their own situation; 52.4% of the interviewees show willingness to try different learning ways, to improve learning efficiency; 40% have ever tried online courses and other informal learning ways to learn interested knowledge apart from profession; 41.7% are willing to remedy the lack of school curriculum through network courses. 69.7% of interviewees are more willing to actively find out answers on the Internet when encountering learning problems.

Above survey results show that, overall speaking, the surveyed college students in border area still has good autonomous learning awareness. When online courses are considered not able to meet learning needs, network curriculum and other informal learning ways will be tried, and in usual learning, the methods to solve problems will be actively explored through the Internet.

4.4 Channel analysis of knowing MOOC
MOOC has attracted strong attention from educational and academic circles, and even the business circles. More and more learners know and understand MOOC through various channels, and many learners actively participate in MOOC curriculum learning.

But the statistical results show (MCQs), up to 45% of the interviewees never hear MOOC, reflecting low cognition rate in border area colleges. 6.5% of interviewees begin to know MOOC through journal and newspapers, while 32.4% know MOOC through network, 13.3% through TV, and 13.2% begin to know MOOC through around teachers or student's recommendation.

The survey results show that, the college students in border area present low understanding degree on MOOC this new thing, indicating their limited channels and means of obtaining outside information, while network is their main channel to know information from outside world. Therefore, the proportion of knowing MOOC through network is the highest; secondly, the spreading rate of "word of mouth" between television and companions is basically the same, but only half of network communications.

4.5 The cognition attitude analysis on MOOC
Considering parts of interviewees are not familiar with MOOC, therefore, a short text will be used to briefly introduce MOOC, to facilitate interviewees to answer follow-up questions.

After having a basic understanding of MOOC, the questionnaire has measured the cognition attitude of the interviewees on MOOC from many aspects. 33.2% of the interviewees show interest to know MOOC; 53.7% of the interviewees think MOOC this type of network learning platform is advantageous for college students’ learning; 54.7% of the interviewees think it necessary to carry out the establishment of MOOC courses in colleges; 39% of the interviewees agree that the learning style of MOOC can more motivate students’ learning interest; 44% of the interviewees agree that the learning approach of MOOC can more adapt to the students' autonomous learning pace.

For MOOC this type of network forms of learning, the test results of multiple choice questions show that, the most recognized function is to broaden students horizons (63.7%); secondly, the publicity of MOOC stimulates learners' curiosity, willing to give a shot (43.1%); thirdly, learners think MOOC courses can promote learning achievement (40.5%), as shown in Figure 1.

![Figure 1. Why choose MOOC.](image-url)

Learners think the most attractive characteristics of MOOC free learning methods (67.6%), followed by the free cost of MOOC courses (55.9%), while the third is that learning is different learning style (53.3%); abundant course type (47.7%) and famous teacher teaching (43.5%) are in hot pursuit. Statistical results are shown in Figure 2.
4.6 Regression analysis on MOOC cognition attitude from the satisfaction degree of school curriculum, and autonomic learning awareness

Adopt mean value for the questions of school curriculum satisfaction degree from interviewees, and make it as independent variable $X_1$; adopt mean value for the questions of autonomic learning awareness from interviewees, and make it as independent variable $X_2$; adopt mean value for the questions of MOOC cognition attitude from interviewees, and make it as dependent variable $Y$. Using multiple regression method to investigate the impact of $X_1$ and $X_2$ on dependent variable $Y$.

Hypothesis H1: school curriculum satisfaction degree and MOOC cognition attitude are negatively correlated;

Hypothesis H2: Learners' autonomous learning awareness and MOOC cognition attitude are positively correlated.

Multiple regression analysis equation is significant ($F=40.054, P < 0.05$), school curriculum satisfaction degree shows weak negative correlation on MOOC cognition attitude (regression coefficient is $-0.15$), but at a significant level of 0.05, $P$ value equals to 0.833, not significant results. The initiative of learners' autonomic learning has shown strong positive correlation with MOOC cognition attitude, significant on statistical meaning ($p<0.05$).

Statistical analysis results show that, suppose that H1 hasn't got support, while H2 has support, namely, the satisfaction degree of school curriculum has not formed impact on MOOC cognition attitude; the important and key factor of forming positive influence on MOOC is learner's learning initiative.

5 CONCLUSIONS

We can see from this survey results, the college students in China border area have limited understanding of MOOC, low level of awareness. Their main information sources are from network, followed by television and social network (family, companions, teachers, etc.). From the perspective of basic network facilities, for the campus network facilities in border areas, either hardware or expense has a large gap comparing with developed areas, the spread and access of information is far less than the convenience and rapidity of developed areas. At the same time, from the perspective of interviewees' basic situation, 46.9% of interviewees come from rural areas, the restriction of economic condition may make it difficult for them to get free use of network hardware (such as laptop, pad, a high-end mobile phones etc), simultaneously they only can obtain small amount of fashion information from owned interpersonal networks (such as family, companions) As a result, overall speaking, the college students in China border areas lack understanding and awareness of MOOC, which has been widely spread in 2012.

The research results show that, the college students in China border area present quite low satisfaction on school curriculum, which lays no significant effect on the formation of MOOC cognition attitude; the key influence factor to form positive perceptions and attitudes towards MOOC lies in learners' learning autonomy, in which the ones with more learning initiative are easy to form a positive cognition attitude of MOOC.

This dissertation focuses on the cognition situation of MOOC from the college students in China southwest border areas, and tries to seek influence factors on MOOC cognition through the form of questionnaire and other empirical methods, one of two hypotheses gains support. However this paper only discusses two independent variables that is satisfaction degree of school curriculum and learners' autonomous learning, but in fact, the factors that influences the cognition attitude of MOOC is complex and diverse. This paper only selects two to conduct empirical research; follow-up studies will continue to explore other influence factors.

REFERENCES