Three-Pronged Approach to Create a Charming Massive Open Online Course

—Discussion on the charm factors of massive open online course from the perspective of college students

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Abstract: With the rapid growth of MOOC courses and learners, some obstacles will inevitably be encountered in the development of MOOC. The author believes that the crux is also mainly due to the lack of sufficient attraction of MOOC courses to students, so we should try to improve the "charm" of MOOC courses in the perspectives of students. This paper constructs an interview method through evaluation, in-depth communication with MOOC learners, constructs a network of attractive factors from the perspective of college students, analyzes the relevant attractive factors of the platform, teachers and MOOC courses itself, and puts forward corresponding suggestions, which can be used as a reference for MOOC operators, MOOC content providers, MOOC tool developers, MOOC service providers and so on.

1. Introduction

The rapid development of Internet technology and the increasing demand for education in all sectors of society make Internet plus education emerge as the times require. The production and use of Massive Open Online Courses (MOOC) is becoming a common practice. Since 2013, with the strong promotion of the Ministry of education, MOOC has developed rapidly in China. With rich content and diverse categories, MOOC has become an important strategic measure to improve education quality and promote education equity. While the number of MOOC courses and learners is growing at a high speed, there will inevitably be some obstacles in the development of MOOC: first, First, there is a huge gap in the number of course registrants, and few people pay attention to many carefully crafted courses. Second, the high dropout rate and low completion rate of MOOC learning are becoming increasingly prominent [1], and MOOC courses can not continuously attract students to participate; Third, although MOOC production will consume a lot of human, material and financial resources [2], However, it is difficult to achieve the preset value goal of MOOC in the end. The author believes that the crux is also mainly due to the lack of sufficient attraction of MOOC courses to students.

MOOC's curriculum resources and learners are scattered on the network. Only when learners reach a certain scale and the completion rate reaches a certain standard, the effect of running courses will be better. Learners are the service objects of MOOC. In order to enable MOOC to realize the value and significance of development, more and more researchers turn their research focus from the perspective of MOOC itself to the perspective of learners. According to the MOOC industry white paper released by the Ministry of education, the types of MOOC users in China are complex, and the educational background covers many levels, such as postgraduates, undergraduates and higher vocational colleges. Nearly half of the users are aged 18-25, and the proportion of college students and postgraduates is more than 80%, indicating that college students are the main users of MOOC in China. How to improve the charm of the course, how to make a course stand out among similar courses, and what characteristics of the course can continue to attract learners - especially college students, have become the key issues of interest. Therefore, if you want to make students more willing to choose courses and invest more in courses, you also need to improve the "charm" of MOOC

courses in the eyes of students.

2. Exploration of MOOC charm factors

2.1 Research method

Evaluation Grid method(EGM) is a commonly used interview method to find charm factors. It is a part of Miryoku engineering, originated from Japan and developed from Kansei engineering[3]. It uses existing objects or image elements as an auxiliary tool. Through in-depth interviews, it allows respondents to compare the perception of similar things, guides respondents to choose preferences and differences, and evaluates the order of likes and dislikes. Then it deeply analyzes the reasons why objects attract users through the ladder method, and obtains the original evaluation. As a factor of median charm, it starts with the evaluation of median concept, The in-depth interview extracts the user's abstract semantic feeling as the evaluation of the upper concept. At the same time, the evaluation of the median concept is embodied and mapped to the specific characteristics and details of the product. Finally, the charm factor structure of the upper, middle and lower concepts is formed, and finally the effective charm factor of the object is extracted [4].

2.2 Data acquisition

1) Interviewee

The interviewees of this study are college students at all levels. By recruiting college students with different MOOC participation levels, they are divided into course selection group and class listening group, using face-to-face interview or online one-to-one interview of Tencent conference. By recruiting a certain number of respondents and using the interview data, we can finally find the charm factors of MOOC.

As of May 18, 2021, the author has recruited 20 students in total. They are college students with different educational backgrounds, from different disciplines and with different MOOC learning experience. The author first subdivides them into two categories: class selection group and class listening group, and then interviews them respectively. Among them, the course selection group can be further divided into three categories: students who have not learned, students who have learned passively and students who have learned actively. All students from the class listening group are active learners who have learned actively.

2) Research sample

Before implementing the evaluation grid method, research samples need to be prepared. When selecting the sample, ask the respondents about the MOOC topics they are interested in in advance, and then search the courses they are interested in on different MOOC platforms according to the interests or needs of each respondent, and take these relevant courses with different characteristics on these platforms as the MOOC research sample of each interview. The main MOOC platforms involved in this study include: icourse163, xuetangX, zhihuishu, CNmooc, and UMOOC. These MOOC platforms have courses selected into national high-quality online open courses,They have their own characteristics, developed earlier in China, mature system and more users.

The research sample of the interview of the lecture group is all MOOC courses that the respondents have registered and studied, so there is no restriction on the MOOC platform.

3) Interview content

Before the interview, the author explains the purpose of the interview with the interviewee. After the respondents have fully browsed the sample courses, they begin to ask questions. The content of the interview is mainly to compare and evaluate these courses for many times according to their preferences, ask the reasons, and then further expand other contents according to the specific interview situation of the interviewees.

3. Analysis of interview data

This study follows the organizational process of evaluation grid method when processing and analyzing data. The interview materials obtained by the author in this research mainly rely on the recording-to-text tool. During the interview process, the interview audio materials are converted into text materials in real time, and the text is sorted out at the first time. First, proofread the text, and then describe, classify and analyze these texts to form an evaluation structure diagram. After all the interview materials are sorted out, the data analysis results are explored and explained, and the MOOC charm factors are obtained.

3.1 Interview data description

In this study, the attractive course topics selected by the course selection group are mostly related to their majors or research directions, and mainly focus on the learning of some tools and software (as shown in Table 1). When choosing specific courses, the respondents have certain psychological expectations. When they meet the psychological expectations, they will be interested in the courses and express that they will continue to have access after the interview, and vice versa. Among them, there are students like this in both passive learning and active learning. They all said they didn't expect to use MOOC to learn at the time. Among the students who are interested in MOOC courses, there are also college students who have never used MOOC. The survey results show that there are still some deficiencies in the promotion of many MOOC courses, which will not only lead to the continuous loss of their existing users, but also the situation that their potential users have not been explored.

Table 1 Overview of interview records of course selection group

Serial number	MOOC Learning situation	Discipline category	Academic degree (Current)	Subject	Charm course	Interested or not
1	Passive learning	Management	Master	Climate change	China's perspective on climate change	Interested
2	Passive learning	Management	Master	SPSS	Fundamentals of SPSS data analysis	
3	Passive learning	Education	Undergraduate	Mental health	Psychological counseling and mental health	
4	Passive learning	Management	Master	PhotoShop	Getting started with Photoshop	
5	Active learning	Management	Master	MySQL	Design Application of MySQL database	Interested
6	Never studied	Science	Undergraduate	R language	Multivariate statistics and R language modeling	Interested
7	Never studied	Art	Undergraduate	Interior design	Interior design hand-painted performance techniques	
8	Never studied	Law	Undergraduate	Criminal law	Criminal law case study	
9	Passive learning	Science	Undergraduate	R language	Multivariate statistical analysis and Application	
10	Never studied	Economics	Doctor	Stata	Panel data model and Stata application	Interested

See Table 2 for an overview of the interview records of the listening group. Among them, students

who take the initiative to study courses often take more MOOC courses, and most of them have studied more than 5 MOOCS, indicating that they recognize MOOC as a learning channel and are used to taking MOOC courses as a learning method. However, the number of MOOC courses they completed is generally far less than the number of courses they have choose to learn. Some students even participate in many MOOC courses, but none of them is in the state of completion. Most of the attractive courses selected by the students in the course attendance group come from the MOOC platform of icourse163, which has a lot to do with the abundant curriculum reserve of this MOOC platform. The course topics selected by the course attendance group are not highly targeted. In addition to MOOC courses related to their own majors or research directions, they will also choose other practical courses. It should be added that the MOOC courses of charm will also include those MOOC courses in non-professional fields, which is common among undergraduate respondents. In addition, MOOC courses which conducted online and offline at the same time have also appeared in the charming MOOC course, and this hybrid teaching method is also very popular with students.

Table 2 Overview of interview records of course attendance group

Serial number	Discipline category	Academic degree (Current)	Number of courses actively studied	Number of courses completed	Charm course	Course platform
1	Science	Master	1	1	Fundamentals of MATLAB language	icourse163
2	Literature	Undergraduate	5+	0	Principles of Economics	icourse
3	Engineering	Undergraduate	5+	2	Python data Analysis and display	icourse163
4	Engineering	Undergraduate	5+	3	Advanced mathematics	icourse163
5	Philosophy	Master	5+	1	From Einstein to Stephen Hawking's Universe	chaoxing
6	Science	Undergraduate	5+	2	Psychostatistics	xuetangX
7	Education	Undergraduate	5+	3	Game theory	icourse163
8	Management	Doctor	5	1	Mind map	icourse163
9	Management	Master	3	1	Cell biology	icourse163
10	Medical Science	Doctor	5+	3	Fundamentals of Python Programming	icourse163

3.2 Establish evaluation diagram

In order to ensure the accuracy and representativeness of MOOC course charm factors, the author combines the superior charm factors in the personal interviews of the course selection group and the course attendance group respectively, retains the superior charm factors with high reference rate, and then continues to sort out the original evaluation items and specific characteristics associated with the superior charm factors to obtain the median charm factors and lower charm factors, Finally, the overall evaluation structure map is established.

In the later stage of the interview, because the first several charm factors have been basically clear and there are no new ideas reappear, the interview scale has not been expanded.

Because MOOC involves many charm factors, if the evaluation diagram is too large, it will appear disorderly. Therefore, according to different evaluation objects, the author further subdivides the lower charm factors into three parts: platform factors, teacher factors and curriculum factors, and then draws different evaluation structure maps respectively. The overall evaluation diagram of the

subdivided course selection group is shown in Figure 1, Figure 2 and Figure 3 respectively.
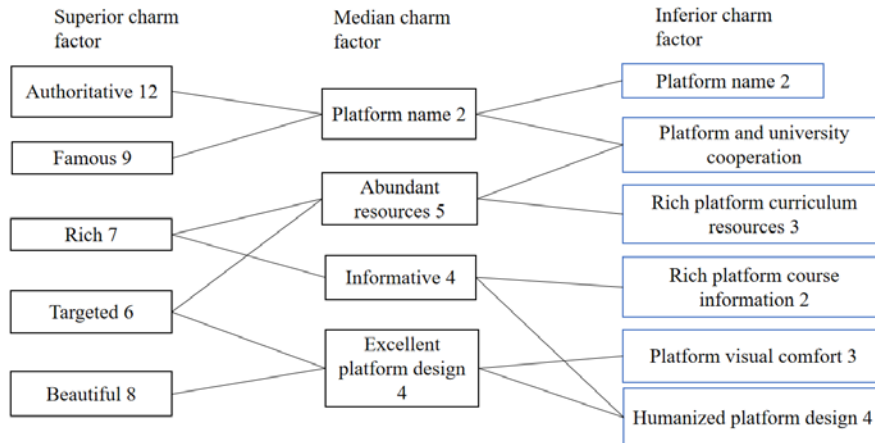

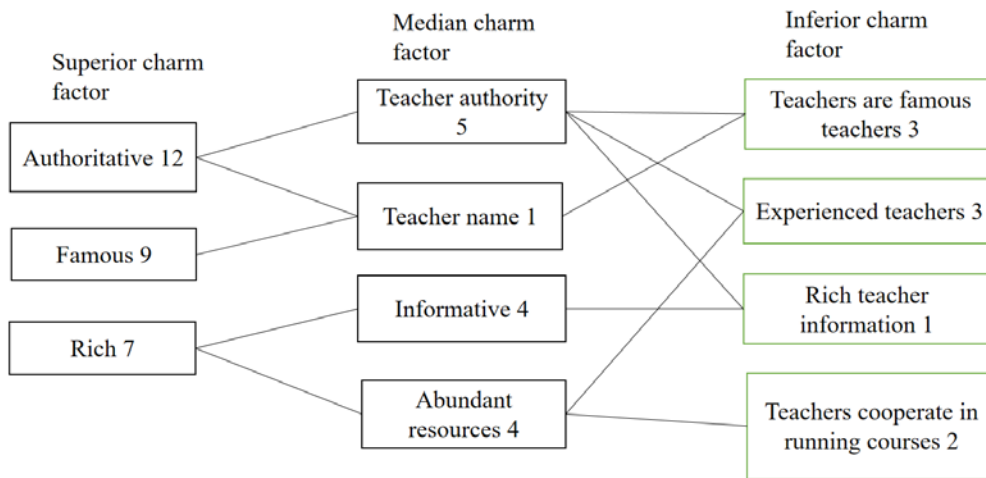Figure 1 Course selection group-Platform attractive factors evaluation diagram

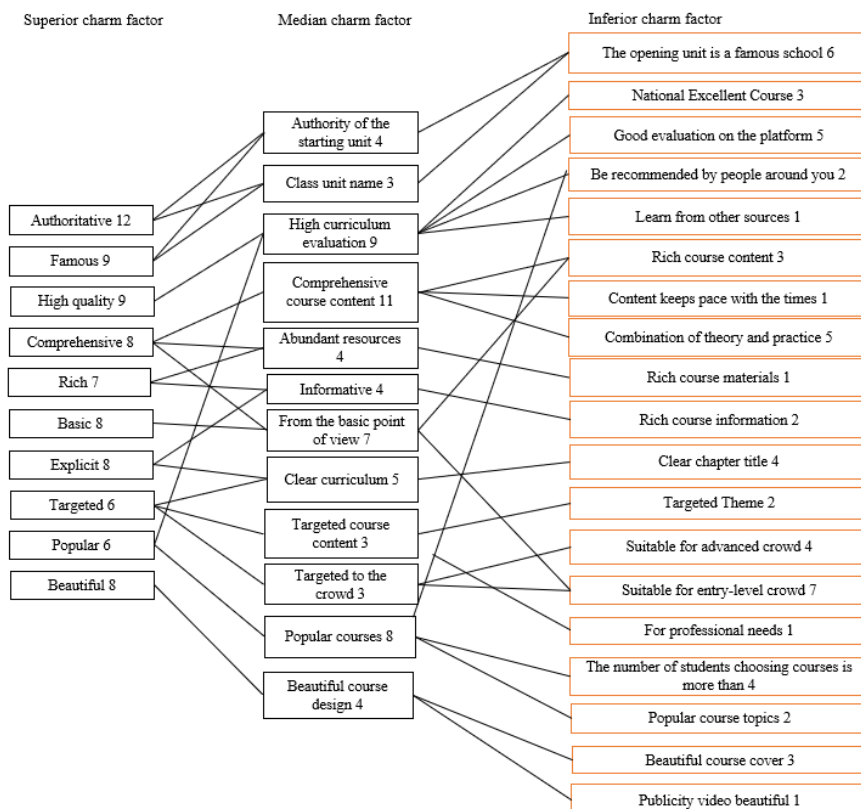Figure 2 Course selection group- Teacher attractive factors evaluation diagram

Figure 3 Course selection group - Curriculum attractive factors evaluation diagram

The overall evaluation diagram of the subdivided lecture group is shown in Figure 4, figure 5 and Figure 6 respectively.

From these evaluation charts, it is not difficult to see that in the course selection stage, college students have less requirements for MOOC platform and MOOC teachers, but more requirements for MOOC itself. College students generally think that authoritative and well-known MOOCs are more attractive. They attach importance to other people's comments of MOOCs, and prefer to choose MOOCs with rich content and strong foundation. In addition, the clarity of the course introduction also adds extra points to the charm of MOOC courses, and college students will choose MOOC topics that they are interested in. If these MOOC courses have a beautiful interface design, they are more likely to be favored by students.

In the stage of attending the MOOC course, with the deepening understanding of MOOC among college students, the requirements for MOOC teachers are also increasing, and different requirements are put forward for MOOC teachers' experience, language and personal style. The demands for MOOC course itself are also deeper. For example, the "easy to understand" factor is a charm point of MOOC repeatedly mentioned by college students. MOOC designers should not only work hard on MOOC content, but also focus on MOOC video production, and not only explain with practice, but also fully interact with students. In a word, these charm factors are closely linked, and only by fully doing every link involved in them can we really improve the charm of MOOC courses.
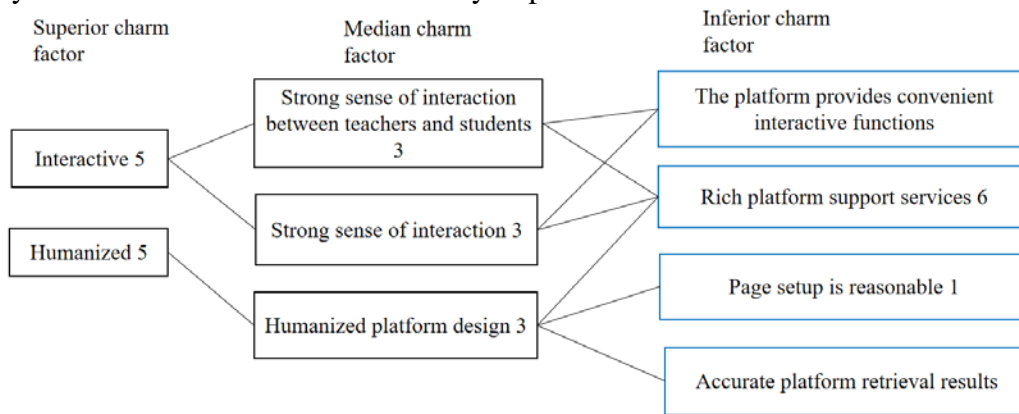

Figure 4 Course attendance group-Platform attractive factors evaluation diagram
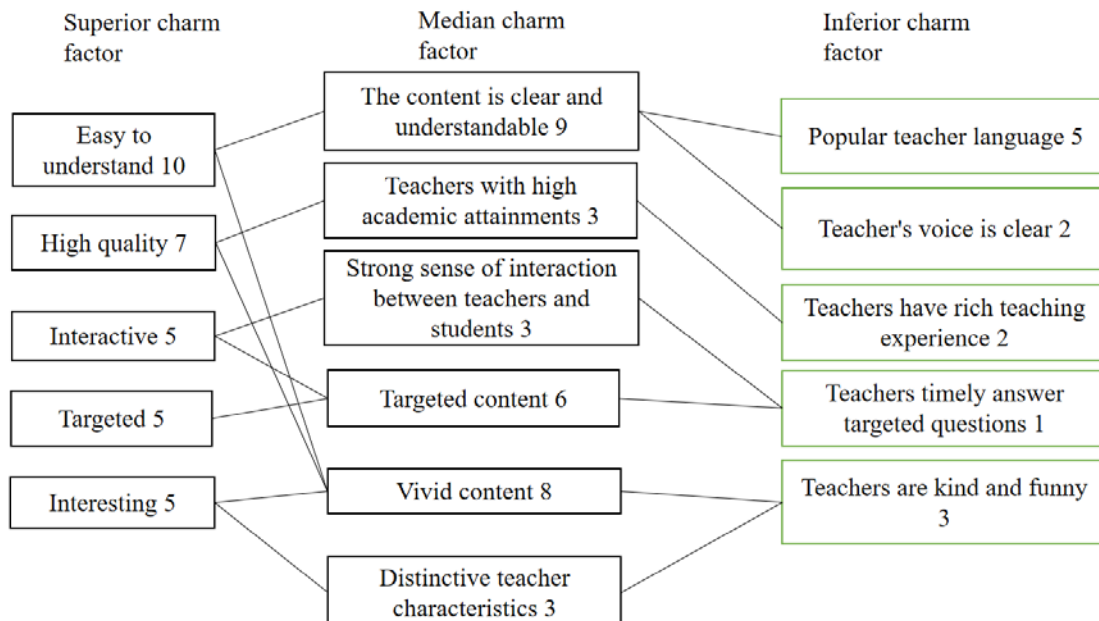

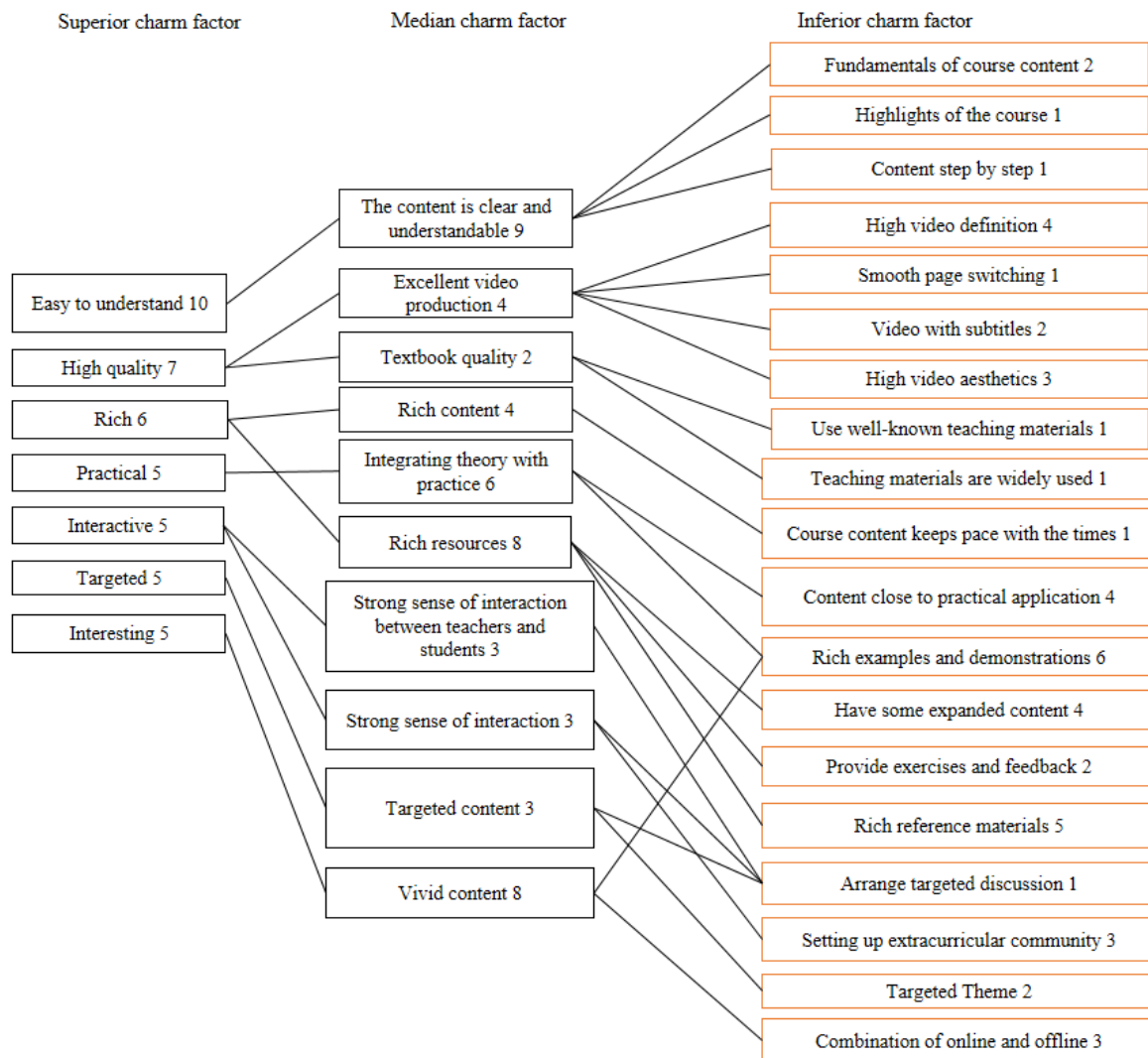Figure 5 Course attendance group-Teacher attractive factors evaluation diagram

Figure 6 Course attendance group- Curriculum attractive factors evaluation diagram

4. Discuss

Through the analysis of the survey results, the author concludes that for MOOC operators, online course service / content providers, course auxiliary tools / service providers and basic equipment providers [6] Some feasible and efficient suggestions for building a more attractive MOOC course.

1) Recommendations for MOOC operators

According to the survey data, MOOC operators, that is, enterprises or institutions that provide MOOC platforms, should first increase the types of MOOC courses, especially the MOOC content that has been popular recently. At present, the number of MOOC courses on many platforms is insufficient. When doing interviews (course selection groups), many students simply can't find a course that matches the subject they want to learn on some platforms. If this happens frequently, users can easily give up MOOC as a learning method. Therefore, MOOC operators need to focus on improving the recall and precision of MOOC retrieval.

In addition, MOOC operators have not done enough and good work in MOOC promotion, especially in China's colleges. The author believes that various advertising forms can be adopted to vigorously promote MOOC platform and excellent MOOC courses. In addition, it is also necessary to conduct course promotion training for MOOC course providers, so that more MOOCs can be exposed to the public's vision to the maximum extent.

2) Suggestions for MOOC content providers

The survey data show that when designing MOOC, MOOC content providers must ensure that

MOOC content is cutting-edge, and the relevant knowledge, methods and technologies taught are up-to-date and will not become obsolete soon. MOOC content must be systematic, and MOOC knowledge points should be carefully sorted and summarized. The coverage of MOOC knowledge points must meet the MOOC curriculum positioning requirements, and the MOOC learning objectives must meet the MOOC level and be reflected in the design of each MOOC unit. The MOOC content must be relevant, accurate and of moderate duration.

When making MOOC, the video definition of MOOC should be high, and it is best to be equipped with corresponding Chinese and English subtitles. Having a teacher window is also the basic requirement of standard configuration; Some respondents also put forward additional MOOC content requirements such as "beautiful design, prominent focus and clear thinking". Some respondents also suggested that beautiful videos and posters, clear and comprehensive course information are also the "charm points" to attract college students to take a MOOC course.

When operating MOOC courses, MOOC lecturers must regularly increase efficient interactive activities with MOOC learners and constantly improve their own professional ability when operating their own MOOC courses. At the same time, we should also pay attention to the intelligibility of knowledge. MOOC keynote teachers should be enthusiastic and infectious in teaching, elaborate MOOC knowledge points in simple terms, and provide a variety of examples and examples for the key and difficult points of MOOC content.

3) Suggestions for MOOC tool developers /MOOC service providers

The survey data also shows that MOOC tool developers or MOOC service providers should first continuously improve their service efficiency, provide more MOOC technical support, learner management, MOOC consulting and other supporting services, and provide real-time problem solutions for learners. They should adopt more efficient feedback mechanism, solve problems in time when they occur, reduce the loss of users, win the favor of users and enhance the charm of the platform.

Secondly, MOOC tool developers or MOOC service providers also need to provide various types of services, especially more interactive functions. Nowadays, online learning has various ways and functions, and various organizations provide different kinds of rich services. MOOC platform is at a disadvantage in this respect. In particular, the improvement of interactive function is the key, which is the function that students are most concerned about. At present, many students say that they can't use the communication function provided by the platform to realize the problems and corresponding requirements that need to be discussed or solved collaboratively in the course. This can be the entry point to improve service quality.

In addition, some respondents also pointed out that reasonable layout, coordinated colors, moderate amount of information, clear navigation and smooth human-computer interaction are all important factors that deserve MOOC tool developers or MOOC service providers to pay more attention to improve and improve.

5. Conclusion

This study uses the method of evaluation grid method to discover and extract the factors affecting the charm of MOOC curriculum, but also reveals some problems in the current development process of MOOC. MOOC operators, online course service / content providers, course auxiliary tools / service providers, infrastructure and software platform providers need to be more user-centered, think and improve the current situation from the perspective of students, and can not be blinded by the apparent prosperity. The author puts forward some targeted and operable suggestions for each operation stage of MOOC, which has certain practical significance for the sustainable development of MOOC.

However, this study also has some deficiencies. In the future, it will classify, quantify and locate various factors more accurately, conduct larger-scale investigation and verification of the research results, and formulate an index system to evaluate the charm of MOOC, so as to better serve the

promotion of MOOC charm.

References

[1] Fan Yizhou, Zhang Guogang, Chen Bodong, et al. Why did they come back?——Analysis of the behavior and motivation of repeat registrants in MOOCs [J]. Open Education Research, 2018, 24(2): 89-96.

[2] Zhao Haixia, Xie Shuxiao, Liu Yonggui, et al. The Development Path of MOOC in Higher Education_Strategic Influence and Rational Thinking_Zhao Haixia [J]. Modern Educational Technology, 2014, 24(7): 5-11.

[3] Wu Yixiang. Research on product form design process combining the construction and evaluation of attractive factors [D]. East China University of Science and Technology, 2019.

[4] Ma Minyuan. Talking about the "heart" technology of Japanese new product development [J]. Journal of Industrial Materials, 2010, (280): 160-172.

[5] Ministry of Education of the People's Republic of China. Notice of the Ministry of Education on announcing the 2018 National Quality Online Open Course Certification Results [EB/OL] (2019-01-11)/[2022-02-21]. http://www.moe.gov.cn/srcsite/A08/s5664/moe_1623/s3843/201901/t20190121_367540.html,2019-01-11.

[6] Dong Xiaoxia, Li Jianwei. Research on the operation mode of MOOC [J]. China Electrochemical Education, 2014, 330(7): 34-39, 149.