

A Comparative Study of College Entrance Examination between China and the UK

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Abstract. The reform of China's new college entrance examination (CEE) is one of the key topics of current research. Some researchers found that there is still a gap between the ideal and the reality of the current CEE reform, but there is still a lack of unified explanation for the details. Therefore, this paper elaborates on the mode of CEE in China and the UK, advantages and disadvantages of CEE reform between China and the UK, and the orientation of China's CEE reform and the UK's CEE reform. By comparing the CEE in China and the UK, this study finds that there are still many deficiencies in the implementation of the reform of the national CEE in China. For instance, the problem of inadequate instructional resources in the shift system, students do not have absolute autonomy in choosing subjects and so on. The CEE in China can take lessons from the UK's CEE in terms of the selection of examination subjects, composition of the CEE, and the implementation of "shift system" on the premise of meeting China's actual conditions, and constantly improve the reform of the national CEE in China.

Keywords: College entrance examination; Reform; Subjects.

1. Introduction

The college entrance examination (CEE) is the junction between high school education and higher education. Taking the CEE is a key step for students to be admitted to universities. The CEE has been tied to the country, society, and individuals, which gets a lot of attention in recent years. After the CEE has been implemented for many years, the advantages and disadvantages have become a topic of general interest making more and more people call for the reform of the CEE. As a result, the CEE has undergone a number of revisions, ranging from the form to the substance. The new CEE not only gives students greater autonomy and increases their enthusiasm, but also breaks through the traditional education mode and explores more comprehensive talents for the country [1]. The CEE reform has played an important role in improving the quality of education, improving the quality of the people, promoting the vertical flow of society, and serving the national modernization construction.

The CEE has made historic contributions to the growth of students, the selection of talents by the country, and social justice. Nevertheless, there are still many contradictions in the reform of CEE in China [2]. According to the article "the overall view in the reform of CEE", the complexity of the CEE system has led to a series of dilemma choices. For instance, the contradiction between testing ability and objectivity, the contradiction between flexibility and simplicity, the contradiction between expanding independence and fair talent selection, and the contradiction between testing characteristics and economic efficiency, etc [3]. Moreover, the implementation of the new CEE shift system also has the problem of insufficient teaching resources [4].

With the acceleration of China's education system reform, people consider that there is still a big gap between China's current CEE system and the CEE system of developed countries. A-Level examination is one of the important examinations for college enrollment in Britain. After nearly 70 years of reform, A-Level examination is the product of the development of British education to a certain stage. By analyzing the development of A-Level examination in Britain, researchers found that A-Level examination, as the "gold standard" for college admission, has an important reference value for the CEE reform in China in terms of policy in British college enrollment [5,6]. Although

the UK's CEE system has some problems and needs continuous self-improvement, it is a relatively mature and internationally recognized student achievement test system in the world today [7]. In order to advance the growth of China's CEE system reform, reformers should also draw lessons from the UK's successful examination system. [8-10].

Exploring the pertinent elements of the China's and the UK's CEE is extremely important, since previous studies still lack a unified explanation of the comparison between the British and Chinese CEE. Although the success of the reform of the CEE cannot be judged simply, this study uses literature research and comparative analysis to analyze the reform of the CEE in the UK and China from three aspects: the choice and form of subjects in the CEE in China and the United Kingdom, the progress and shortcomings of the CEE in China and the United Kingdom, and the trend of the reform of the CEE in China and the United Kingdom. Based on the above discussion, it can be seen that the education systems in China and the UK are very different and have their own characteristics and problems. The purpose of this study is to investigate the advanced achievements of British education and improve the CEE policy in China in combination with the special background of Chinese society by comparing the data on optional subjects, results of CEE, and implementation of reform policies between China and Britain. In addition, this study also hopes to find the common law regarding the development of the CEE through comparison, and use the law to make a macro plan for the CEE policy in China.

2. Organization of the Text

2.1 College Entrance Examination in China

2.1.1 The mode of college entrance examination in China

Until 2022, there were four batches of new CEE reforms. The first batch of new CEE reforms was in 2014, and the provinces were Shanghai and Zhejiang; The second batch of new CEE reform was in 2017, and the provinces were Beijing, Shandong, Tianjin and Hainan; The third batch of CEE reform was in 2018, and the provinces were Chongqing, Jiangsu, Fujian, Hebei, Hubei, Hunan, Guangdong and Liaoning; The fourth batch of CEE reform is in 2021, and the provinces are Guangxi, Gansu, Jilin, Anhui, Jiangxi, Guizhou and Heilongjiang. There are two examination modes in the reformation of China's CEE. The "3 + 3" examination mode is 3 compulsory examinations + 3 optional examinations. The first "3" refers to the unified CEE subjects of foreign language, Chinese, and mathematics; The latter "3" refers to the independent selection of three subjects from politics, physics, chemistry, geography, history, biology and other subjects. At present, the provinces that adopt the "3 + 3" examination mode are: Shanghai, Zhejiang, Beijing, Tianjin, Shandong and Hainan. Students in Zhejiang Province can select three minor subjects from seven subjects, including chemistry, physics, politics, history, geography, technology and biology. The "3 + 1 + 2" examination mode divides the six minor subjects of high school into two parts: the first-choice subjects and the second-choice subjects. Among them, the first-choice subjects require candidates to choose one from "physics and history"; the second-choice subjects require candidates to choose two from "chemistry, biology, politics and geography" [2].

2.1.2 Advantages and disadvantages of China's college entrance examination reform

This paper analyzes the undergraduate acceptance rate of some provinces in the third batch of CEE reform to explore whether the new CEE is more conducive to students' pursuit of academic qualifications. Considering that the third batch of CEE reform will be launched in 2018 and the new CEE will be conducted in 2021, the researchers selected the undergraduate admission rate from 2018 to 2022 in terms of time. The Figure 1 shows the undergraduate acceptance rates of Guangdong, Chongqing and Hunan in 2018-2022 [11-15]. In addition, there are also the undergraduate acceptance rate of Fujian in 2018-2021 [11,12,13,15].

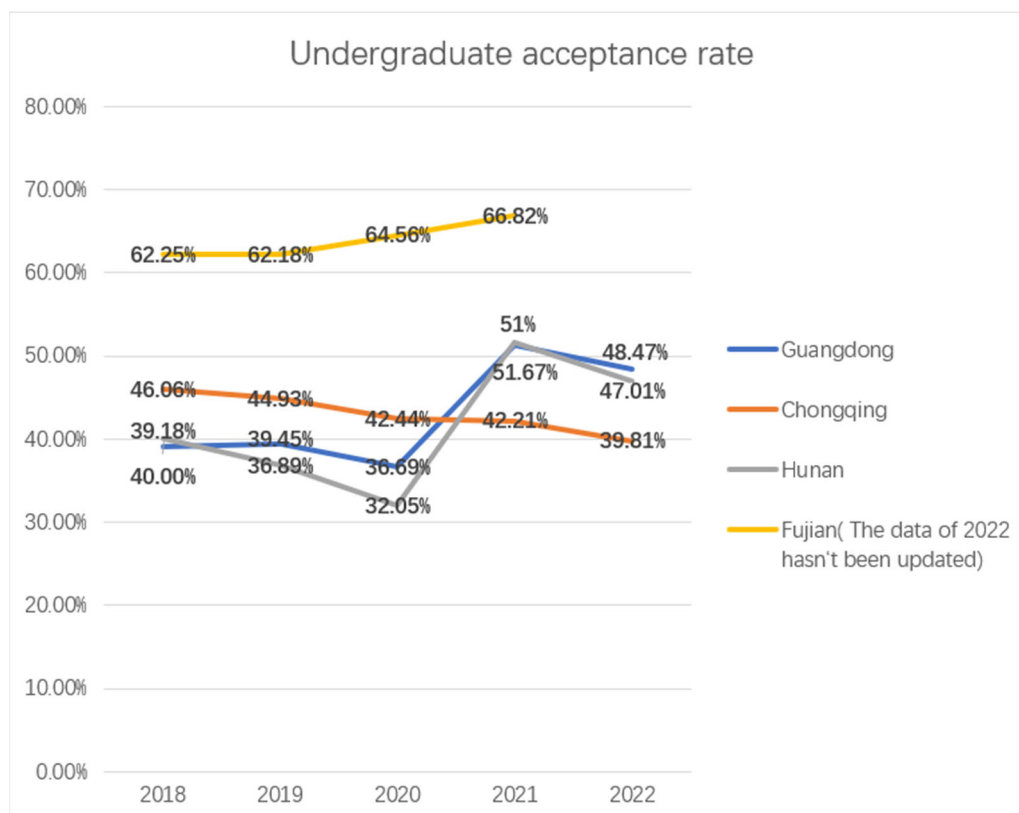


Fig.1 Undergraduate acceptance rate

The researchers found that even though the data on the undergraduate acceptance rate were unstable after the new CEE was conducted in 2021, the undergraduate rate of most provinces showed an upward trend after the CEE reform. This shows that the reform of CEE is conducive to students' pursuit of academic qualifications.

The new CEE has established a scientific and reasonable talent evaluation system to screen, train and explore potential talents objectively. This reform will give students more autonomy, because it gives them more development directions and allows them to choose the subjects they want to choose, instead of just dividing students into arts and science as before.

However, there are still a series of imperfections in the reform of CEE. First of all, for most schools, there are no 12 classes in a grade, so it is very unrealistic to divide into the traditional model classes of 12 subject combinations. For these small number of students who have chosen less popular subjects, the school may implement a “mobile learning system” for them, which means they have to go to different classes to study the subjects they choose with others [4].

Secondly, students do not have absolute autonomy in choosing subjects, and they are also affected by various factors. Family environment, social environment, educational resources and students' decisions are all factors that affect students' choice of subjects [4]. According to the requirements of the new CEE reform plan, subjects can be selected by students according to their specialties and hobbies, and put the right of choice in the hands of students, which can improve their initiative. The original intention of the reform is to promote students to achieve their maximum development. However, the fact is quite the opposite. The choice is no longer based on students' interests and hobbies, but to ensure that they can achieve good results and stand out in the CEE. The total score of course selection tends to be utilitarian, contrary to their original intention.

Thirdly, the new CEE requires parents and students to be more cautious and familiar with policy changes when filling the intention for university, since there are subject restrictions and score requirements in some majors. If students fail to meet the filling requirements, they may not be admitted to the universities. However, according to the researcher's survey [4], some parents said that they were confused about the CEE policy and had not yet had a clear notion, which could easily lead

to errors in filling the intention for university. Therefore, students need the joint guidance of schools and parents on how to select subjects in combination with their own interests, college professional Enrollment Requirements and their own abilities.

2.1.3 The orientation of China's college entrance examination reform

The fifth batch of new CEE reform provinces include Shanxi, Henan, Shanxi, Inner Mongolia, Sichuan, Yunnan, Ningxia and Qinghai. This policy will be launched in 2022, and the new CEE will be implemented in 2025.

By observing the first four batches of CEE reforms and the new rules for CEE reform in 2022, the future development trend of the new CEE will continue to abolish the examination form of dividing arts and sciences, and will develop in the direction of "3 + 1 + 2".

The first and second batch of provinces and cities participating in the comprehensive reform of the CEE have adopted the "3 + 3" model, which provides students with at least 20 subject combinations compared with the previous "3 + X" model. The increase in the combination of examination subjects gives students more choices, but at the same time, it also produces problems such as the shortage of resources for the shift system [4], students' abandonment of difficult choices and so on [3]. Therefore, the third and fourth batch of provinces and cities participating in the reform adopted the "3 + 1 + 2" model. This model takes physics and history as compulsory subjects to prevent students from taking refuge. The "3 + 1 + 2" examination mode reduces the number of subject combinations from 20 to 12. It alleviates the gap of teaching resources in high schools, reduces the difficulty of implementing the shift system, and strengthens the connection between high schools and universities. Considering the unity and diversity, Professor Liu Haifeng believes that the "3 + 1 + 2" scheme is a compromise between the "3 + X" and "3 + 3" schemes [3].

2.2 College Entrance Examination in the UK

2.2.1 The mode of college entrance examination in the UK

A-Level is the main way for British students to enter universities. It is worth noticing that A-level is not a single examination, but an evaluation system. Each A-Level subject contains 6 exams, so each student must pass at least 18 exams in 2 years. If the students are not satisfied with the results, they can also request to review the examination papers or take make-up examinations. Students with excellent scores can also take the Advanced Extension Award (AEA=Advanced Extension Award), and their scores can be added to their CEE scores. There are more than 70 subjects can be selected, including English language and literature, mathematics, physics, biology, chemistry, history, geography, economics, art and design, music, modern foreign languages, business, accounting, film and television media, computer and law. Generally speaking, students are only required to take four courses in the first year of A-Level. In the second year, students can eliminate one of the courses according to their own conditions and concentrate on the remaining three courses. There are no mandatory requirements for subjects in the exam, but candidates should choose according to their future majors in the university. It should be pointed out that the score of A-Level is not completely determined by the written examination results. Candidates are also required to submit a paper in each subject according to the designated topic, and the proportion of papers in the final score is also growing, which currently accounts for 30%. Each student will get a final score after integrating their examination results and thesis scores. The grade standard of A-Level is expressed by the letters A-E, which are arranged from high to low according to the grade. After finishing the A-Level examination, students apply to several universities according to the teacher's and their own estimates of the results. The university will give conditional admission according to their estimated results, and will issue formal admission after the results are announced [10].

2.2.2 Advantages and disadvantages of the UK's college entrance examination reform

To begin with, students can learn the subjects they like in the CEE in UK, which can maximize their potential, and deepen the depth of course learning. Since most students plan this stage of study according to the professional standards of the higher education institutions they will apply for in the

future, this makes this stage more targeted and professional, so that students can be ready before entering the university.

Apart from that, the UK's CEE helps prevent a test from determining a person's life. The A-level test is composed of test scores and thesis scores, which enables students to think more deeply about their subjects and finally obtain satisfactory results. Therefore, A-level test can assess students' fundamental knowledge and personal quality in an effective way, allowing well-rounded students to stand out in the exam. Additionally, the UK's CEE is completed in batches over the allotted period rather than all at once. The UK's CEE effectively avoids the accidental factors that may occur in the examination, so that it can select truly outstanding students for the society [10].

Moreover, due to the long implementation time, the UK is more advanced in the implementation of the shift system. Taking the "shift system" teaching of Eton Public School as an example, its comprehensive and flexible curriculum structure, sufficient high-quality teachers, and diversified and unique evaluation system have played an important role in the UK's CEE.

Even though the CEE system in UK is very advanced, there are still shortcomings that need to be noticed. Under the absolute autonomy of selecting subjects, students only need to learn 3 or 4 subjects of their own interest, and do not need to learn about other subjects, which is not conducive to students' development.

Furthermore, the current undergraduate acceptance system in UK has two characteristics: first, British universities issue admission notices before the big exam, sometimes even offer unconditionally; Secondly, the admission notice issued by British universities mainly refers to the estimated results, rather than the CEE results. Estimated grades play a key role in UK undergraduate applications. Although teachers have strict criteria for performance estimation, it is subjective after all, and according to British media reports, the accuracy of A-level performance estimation is less than 20%. Because of this system, disadvantaged students are unlikely to apply to key universities under the current enrollment system, because their achievements are often underestimated. Students with low estimated scores will lose their motivation to learn because their chances of applying to good schools are reduced. However, for students whose estimated scores are too high, they may make some unrealistic applications. Therefore, there has always been a voice in the UK for reform of undergraduate admission [16].

2.2.3 The orientation of the UK's college entrance examination reform

First of all, the reform of A-level examination will lead to the reform of student training mode. The British Ministry of Education has gradually shifted the focus from the selection function in the A-level examination system to the education function, requiring middle schools to pay more attention to the cultivation of students' comprehensive learning abilities such as independent and creative thinking, as well as the cultivation of students' knowledge skills and practical skills in teaching, which is conducive to changing the exam oriented education oriented high school talent training model.

Secondly, the A-level examination mode will be constantly improved. Students can freely choose subjects according to the specific requirements of the target university enrollment, and take the A-level exam for many times, which might seriously affect the effective play of the selection function of A-level examination. Therefore, the A-level examination will continuously strengthen the proportion of practical skills, increase the difficulty of evaluation, and improve the selection criteria to meet the actual needs of talent selection in colleges and universities. If the students who have obtained the AS certificate want to continue to obtain the A-level certificate, they can only go through the complete A-level learning system again, and can no longer obtain the A-level certification in stages as before [17].

3. Enlightenment from the Reform of the College Entrance Examination in the UK

By comparing the CEE mode of China and the UK, the progressiveness and deficiency in CEE in China and the UK, and the orientation of CEE reform of China and the UK, the experience of Britain's CEE system can be used as a model for China's CEE reform.

Firstly, the implementation of the shift system in China's CEE reform can learn from the UK. According to the article "The shift system teaching and its characteristics of Eton Public School", Eaton Public School divides English, mathematics, science and other different subjects into different classes according to teaching objectives and teaching contents. With students' subject achievements as a reference, and in combination with students' personal needs and learning abilities, the school will decide which level of teaching classes students should enter in each subject, and provide students with the most appropriate learning objectives, learning contents, teaching environment and appropriate guidance [18]. In comparison to the shift system in the UK, the researchers find that most students are not very satisfied with the current shift system in China, teacher and teaching equipment [4]. It can be noticed that there still has great room for improvement in the implementation of the shift system in China during the reform of China's CEE.

Secondly, China's CEE can learn the mode of the British A-level examination. Although students can take the CEE again, China's CEE model still needs to be improved. The CEE in China is only held once a year in the form of centralized written examination, which leads to many accidental factors that cannot be avoided. On the contrary, the final score of the A-level exam is composed of exam scores and essay scores. This exam mode is conducive to the examination of students' basic knowledge and personal qualities. In addition, the A-level test is conducted in several times within the specified time, avoiding the accidental factors that may occur in one test [10].

4. Conclusion

This paper finds that there are great differences between the UK and China in selecting subjects for the CEE. First of all, compared with the optional subjects in China's CEE, the optional subjects in the UK are more abundant. Secondly, in comparison to the shift system under the reform policy of China's CEE, the shift system is very perfect due to the long implementation of the shift system in the UK. Whereas the China's shift system still needs to be improved in many aspects. Thirdly, the UK university entrance examination is not completed at one time, but carried out in batches within the specified time, which avoids many unexpected factors compared with the Chinese CEE. However, China and the UK still have their own shortcomings in the CEE. For instance, some students under the British CEE policy are in a very disadvantageous position when they are expected to score in the CEE, and the complexity of China's CEE policy is not conducive to students' voluntary application. In general, both China's CEE and the UK's CEE give students the autonomy to choose subjects in the CEE. China's CEE reform can fully absorb the experience of the UK's CEE and constantly improve the education system, so as to further develop the CEE reform.

The main contribution of this paper is that it provided an objective comparison about the CEE between China and the UK, which will help other researchers to understand the differences in the CEE between these two countries more comprehensively. The limitation of this study is that the data is not enough, especially in the data of the undergraduate acceptance rate of some provinces in the third batch of CEE reform. As the result of the CEE is affected by many factors, the success of the reform of the CEE cannot be judged simply. It is still limited in its explanatory power to analyze the reform results only from the undergraduate graduation rate. Future researches are suggested to pay more attention to the combination of multiple factors and richer data for analysis.

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