

Analysis of the Influence of College Entrance Examination System Reform on Educational Equity

Shiyin Huang

Hubei Polytechnic University, Huangshi, China

Abstract: *This paper focuses on the relationship between the reform of the college entrance examination system and educational equity. First of all, the definitions of college entrance examination system and educational equity are clarified, and the internal relations between them are elaborated. Then, the paper traces the historical change track of the college entrance examination system in the past years and a series of reform processes it has undergone. At the same time, it deeply analyzes many problems exposed by the traditional college entrance examination system in terms of fairness from multiple dimensions such as regional differences, social class differentiation and exam content setting. Then, the paper deeply analyzes the various measures taken by the new round of college entrance examination system reform in the process of promoting educational fairness and the results produced, including the positive changes in many aspects, such as the equalization of examination opportunities, more diversified comprehensive evaluation system and the expansion of the autonomy of colleges and universities in the recruitment process. In addition, a series of challenges in the reform process are discussed, such as the difficulties encountered in the implementation of comprehensive quality assessment and the potential unfair risks caused by the selection mechanism of examination subjects. Finally, the paper puts forward relevant suggestions aimed at further optimizing the reform of the college entrance examination system so as to effectively guarantee educational equity, hoping to provide solid theoretical support and practical reference examples for promoting the college entrance examination system to continue to move towards a fairer, more scientific and rational direction.*

Keywords: College entrance examination system reform; Educational equity; Comprehensive quality evaluation; Optional subject.

1. INTRODUCTION

Educational equity is an important cornerstone of social equity and is related to the long-term development of the country and social harmony and stability. In terms of regional and inter-group educational equity, Baowei and Liu Yanhui [1] analyzed the differences in the allocation of higher education resources in China from three aspects: regional, institutional hierarchy and fund structure. Liang Hengjiang and Luo Congzheng [2] analyzed the negative effects on the central and western regions from the imbalance of national education investment in the eastern and western regions, mainly including the negative effect of family and its intergenerational transmission, the negative effect of talents in regional development, and the negative effect of regional social stability. He Yajuan [3] listed such problems as the influence of regional factors in college entrance examination enrollment and the urgent need to improve the current situation of unfair education for children of migrant workers. As a key link in our country's education system, the college entrance examination system plays an extremely important role in talent selection and educational resource allocation. The course of its reform has been concerned by all sectors of society, because the reform of the college entrance examination system directly or indirectly affects the realization of educational equity. The in-depth study of the impact of the reform of the college entrance examination system on educational equity is of great significance for optimizing the allocation of educational resources, promoting the mobility of social classes and improving the quality of the whole people.

2. THEORETICAL EXPLANATION OF COLLEGE ENTRANCE EXAMINATION SYSTEM AND EDUCATIONAL EQUITY

2.1 Connotation and Function of College Entrance Examination System

As the key selection mechanism of higher education entrance examination in China, the college entrance examination system evaluates the academic level and ability of many high school graduates by virtue of unified examination criteria and procedures, and thus serves as the source of college selection. The college entrance examination occupies a very critical position in our country's education system, and has always been the focus of attention from all walks of life. The root cause behind this is that the college entrance examination can be regarded

as one of the core means of education to achieve equality and defend fairness in the whole society.

Zhou Xu put forward [4] that the fairness of the college entrance examination is concentrated in three dimensions: the fairness of rights in the college entrance examination process, the fairness of opportunities under the college entrance examination system and the fairness of the content of the college entrance examination paper. Wei Gengxiang pointed out [5] that the college entrance examination has played a positive role in guaranteeing the fair enjoyment of education rights, scientific assessment and fair selection, and fair quota allocation. Liu Haifeng recognized [6] the remarkable achievements of the college entrance examination in ensuring the distribution of high-quality educational resources, balancing urban-rural equity and promoting social class mobility. Wang Houxiang believes [7] that the existence of college entrance examination has improved the admission allocation mode of colleges and universities, created a fair policy environment, and maintained the equality of admission opportunities in higher education.

The main functions of the college entrance examination system include selecting students with certain knowledge reserves and learning ability for colleges and universities, guiding the teaching trend and content of middle school education, and stimulating students to study hard to move towards a higher level of education.

2.2 Concept and Dimension of Educational Equity

Educational equity means that all members of society have equal rights and opportunities when receiving education. Based on the social philosophy, Swedish educator Hussen [8] proposed the "three-stage theory" of educational equity, namely, starting point equity, process equity and result equity. Starting point equity focuses on the equality of the education opportunities, and will not be affected by regional differences, family origins, racial differences and other factors; Process equity focuses on the balanced distribution of resources in the educational process, such as the provision of teachers, teaching facilities and so on. Outcome equity focuses on the relative equality of the educatees in their academic achievement and future development path, that is, they can obtain similar improvements and returns through education.

Wu Ze, Liu Hong and other scholars [9] [10] have also analyzed the three types of educational equity summarized by McMahon. The first is level equity, that is, the educatees in the same situation can enjoy the same treatment; The second is vertical fairness, which means that educatees in different situations will get different treatment arrangements; The third is intergenerational equity, which indicates that the educated of different generations enjoy different treatment, the educational inequity of the previous generation can be improved, the educational standard of each generation can show a new style, and the current generation needs to retain resources for the sustainable development of education for the future generations.

2.3 Relation between College Entrance Examination System and Educational Equity

The college entrance examination system occupies a key position in the process of achieving educational equity and is an extremely important way to achieve it. When the gaokao system is reasonable, it is a powerful way to ensure that students from different regions and family backgrounds have a relatively equal opportunity to gain admission to higher education. With the help of unified assessment norms, students who meet the admission standards of colleges and universities are accurately selected, effectively avoiding the unfair interference that may be caused by human subjective factors.

In addition, the guiding effectiveness of the college entrance examination system will also have a profound impact on the distribution pattern of secondary education resources and the improvement of teaching quality, and then indirectly act on the promotion and realization of educational process equity and outcome equity, and play an indispensable role as a bridge and link in the macro structure of the construction and improvement of the entire educational equity system.

3. HISTORY AND REFORM OF THE COLLEGE ENTRANCE EXAMINATION SYSTEM

3.1 Establishment and Initial Development of the College Entrance Examination System (1952-1965)

In 1952, China officially established a unified national college entrance examination system, which played an active role in selecting talents and promoting the development of higher education. The examination subjects are

relatively unified, and the admission standards are more clear, which initially guarantees the fairness of higher education admission opportunities, and provides a large number of much-needed talents for the construction of New China.

3.2 Interruption and Restoration of the College Entrance Examination System (1966-1977)

During the "Cultural Revolution", the college entrance examination system was interrupted and the recommendation system was adopted for higher education admission. This method lacked objective assessment standards, resulting in serious damage to educational equity, and many outstanding students lost the opportunity to receive higher education. In 1977, the college entrance examination system was restored, which rekindled the hope of young students to pursue knowledge and change their fate, greatly promoted the return of educational equity, and became an important turning point in the history of Chinese education.

3.3 The Reform and Exploration Period of the College Entrance Examination System (1978-2013)

At this stage, the college entrance examination system carried out various reform attempts. For example, the examination subjects are constantly adjusted, from the arts and sciences to the exploration of "3+X" mode, trying to examine the overall quality of students while taking into account the development of personality; The autonomy of colleges and universities in recruiting students has been gradually expanded, and some colleges and universities have begun to experiment with independent enrollment policies to select students with special talents and innovative potential. To some extent, the implementation of the provincial proposition takes into account the differences in educational levels in different regions. However, in this process, some fairness problems are gradually exposed, such as the difference of regional admission scores and the non-standard policy of extra points.

3.4 A New round of College Entrance Examination System Reform (2014-present)

The new round of reform of the college entrance examination system, which began in 2014, takes the promotion of fairness and scientific selection of talents as the core purpose. Its main measures are as follows: First, the implementation of classified examination, the college entrance examination is divided into general undergraduate admission examination and higher vocational college admission examination and other different categories; The second is to promote the "3+3" or "3+1+2" optional examination mode, so as to greatly expand students' autonomy in the choice of examination; The second is to build the comprehensive quality evaluation system, in order to consider the comprehensive quality of students in an all-round way; There is also a gradual removal of the college entrance examination extra points, and standardized management of special types of enrollment. This round of reform has extremely strong strength and extremely broad scope, and its purpose is to carefully create a more fair, scientific and reasonable college entrance examination system, so as to lay a more solid and fair system cornerstone for the long-term development of the education field and the future of the majority of students.

4. PROBLEMS IN EDUCATIONAL EQUITY UNDER THE TRADITIONAL COLLEGE ENTRANCE EXAMINATION SYSTEM

4.1 The Area is Unfair

There is a big gap between the scores of college entrance examination in different provinces, especially in the admission of key universities. For example, some regions with rich educational resources and concentrated universities have relatively low scores, while the Midwest and other regions with relatively backward education have relatively high scores, which makes students with the same score face completely different admission opportunities in different regions, seriously violating the principle of educational equity. At the same time, the eastern developed regions are far superior to the central and western regions in terms of teachers, teaching facilities and educational funding investment. This imbalance of resources leads to the unfair starting point and process of students in the process of receiving education, which in turn affects the college entrance examination results and admission results. For example, students in developed regions can enjoy more high-quality extracurricular tutoring, experimental equipment and information-based teaching resources, while students in central and western regions are relatively lacking in these aspects.

4.2 Class Inequality

Students from families with better economic conditions can get more educational resources, such as participating

in various expensive after-school tutoring classes, international exchange programs, hiring tutors, etc., which helps them achieve better results in the college entrance examination. However, students from poor families can only rely on the basic teaching resources of the school, and are at a disadvantage in the competition, and it is difficult to obtain equal opportunities for admission. There are also some families who use social connections to seek improper benefits for their children in the college entrance examination enrollment process, such as obtaining special care through "subordinated students" and "connected families", which seriously undermines the fairness of the college entrance examination system and makes students from ordinary families face an unfair competition environment.

4.3 The Exam Content is Unfair

The traditional college entrance examination mainly focuses on the examination of knowledge memorization and problem-solving ability, which is difficult to comprehensively evaluate the comprehensive quality and innovative ability of students. This limitation of the examination content is not conducive to students with special talents and innovative thinking, but not dominant in the traditional examination, limiting the diversified selection of talents, resulting in a certain degree of educational inequity.

5. THE PROMOTION EFFECT OF THE NEW ROUND OF COLLEGE ENTRANCE EXAMINATION SYSTEM REFORM ON EDUCATIONAL EQUITY

5.1 Equalization of Examination Opportunities

The classified examination provides a variety of ways for different types of students to study. Vocational colleges and universities select students suitable for vocational education in advance by means of separate enrollment examinations, and these students can choose to apply according to their own interests and specialties, and are no longer limited to competing with ordinary undergraduate students on the same college entrance examination track. This makes vocational education and general higher education realize the separation of enrollment, broadens the channels for students to study, and guarantees the equal opportunity of examination for students with different learning abilities and vocational tendencies. There are also some subjects to implement more than one year test, such as English subjects in some areas to pilot multiple tests to obtain the best results. This measure reduces the pressure on students to lose the opportunity to study because of a mistake in the exam, gives students more opportunities to show their true level, and improves the fairness and scientific nature of the exam.

5.2 Comprehensive Evaluation of Diversification

The comprehensive quality evaluation covers students' ideological and moral character, academic level, physical and mental health, artistic quality, social practice and other aspects, which has changed the situation that the only admission basis is simply based on college entrance examination results. When colleges and universities refer to the comprehensive quality evaluation results, they can have a more comprehensive understanding of students' personality characteristics and comprehensive quality, and select students with innovative spirit, practical ability and social responsibility. This is conducive to breaking the "only score theory", promoting the all-round development of students, so that students with different talents and potentials have the opportunity to stand out, reflecting the diversity of educational equity. At the same time, colleges and universities have more autonomy in the process of enrollment, and can formulate enrollment regulations and admission standards according to their own school positioning, subject characteristics and talent training goals. Colleges and universities can make exceptions for students with outstanding performance or special talent in certain subject areas, which helps to select diversified talents who meet the special needs of colleges and universities, avoid talent burying caused by unified standards, and further improve the fairness of education.

5.3 Promote Balanced Allocation of Educational Resources

The "3+3" or "3+1+2" test selection model has played a positive guiding role, driving high schools to optimize and enrich the curriculum, and significantly increasing the teaching resources for non-traditional college entrance examination subjects such as physics, chemistry, biology, history, geography, and politics. In this way, the imbalance caused by the excessive tendency of senior high school education to the main subject of the college entrance examination in the distribution of teaching resources in the past has been effectively reversed, enabling students to obtain more adequate and complete learning resources in various disciplines, and effectively promoting the fairness of the education process.

In the process of the new round of college entrance examination system reform, policy planning and formulation have increasingly highlighted the concept of regional coordinated development. For example, through various channels such as national special plans, local special plans and university special plans, we should focus on strengthening the enrollment support tendency of students in rural and poor areas, effectively broaden the channels for students from these areas to enter key universities, and gradually narrow the gap between regions in terms of higher education enrollment opportunities. In this way, we can actively promote a more balanced and reasonable distribution of educational resources among different regions and lay a solid foundation for the comprehensive and in-depth development of educational equity.

6. NEW CHALLENGES FACING THE REFORM OF THE COLLEGE ENTRANCE EXAMINATION SYSTEM

6.1 Difficulty in Implementing Comprehensive Quality Evaluation

Comprehensive quality evaluation involves many dimensions, and it is difficult to unify the evaluation standards in each region and school during the implementation process. Different schools have different evaluation standards for students' moral character, social practice and other aspects, which may lead to the comparability and fairness of evaluation results. For example, in the evaluation of students' social practice activities, some schools may focus on the quantity of activities, while others pay more attention to the quality and influence of activities. This difference makes it difficult for colleges and universities to make an objective and fair comparison when referring to the comprehensive quality evaluation results. There are many subjective factors in the process of comprehensive quality evaluation, such as teachers' evaluation of students' moral character, students' self-evaluation and classmates' mutual evaluation. These subjective evaluations are easy to be interfered by interpersonal relations, personal emotions and other factors, which may lead to the evaluation results can not truly reflect the comprehensive quality of students, thus affecting the fairness of college entrance examination.

6.2 Hidden Dangers of Inequity Brought About by Subject Selection

In the mode of selecting subjects, there are too many or too few students in some subjects. For example, in some areas, the number of physics subjects is small, which may lead to the relative shrinkage of physics teaching resources in high school, affecting the training of physics talents. At the same time, the different subjects also make it difficult for colleges and universities to carry out fair professional admission. For some majors with high requirements for specific disciplines, it may be difficult to select suitable talents due to the insufficient number of students choosing the discipline, or face fierce competition due to the excessive number of students choosing the discipline, resulting in new inequity. The scoring system is adopted to solve the problem of difficulty difference among different subjects, but the fairness dispute also exists in the scoring system. For example, in the case of large differences in the examinee groups, scoring may lead to a large deviation between the original scores of some students and the scores after scoring, resulting in the phenomenon of "high scores and low scores and high scores", which affects the admission results of students and raises questions about the fairness of the scoring system.

6.3 The Gap in Educational Resources Still Exists

Although the reform of the college entrance examination system has promoted the balanced allocation of educational resources to a certain extent, the gap of educational resources between regions, between urban and rural areas and between schools is still significant. Developed areas and high quality schools still have great advantages in the construction of teacher teams, the renewal of teaching facilities, and the level of education informatization, which may lead to different starting lines for students in the comprehensive quality training and college entrance examination competition. Even under the new college entrance examination system, this gap in educational resources will still have a certain negative impact on educational equity.

6.4 Suggestions on Improving the Reform of the College Entrance Examination System to Ensure Educational Equity

The state should formulate a unified standard framework for comprehensive quality evaluation, clarify the basic elements and index system of evaluation in each dimension, and provide a reference basis for schools in all localities. At the same time, schools are allowed to refine and supplement within the framework according to their own actual conditions, to ensure that the evaluation standards are both unified and flexible, and to improve the comparability and fairness of evaluation results. Establish and perfect the supervision mechanism of the

comprehensive quality evaluation process, strictly supervise every link in the evaluation process, and prevent improper interference of subjective factors. Information technology means can be used, such as the establishment of comprehensive quality evaluation information platform, to achieve the whole process of evaluation records and data disclosure, accept social supervision, and ensure that the evaluation results are true and reliable.

Education departments should strengthen the guidance and regulation of elective subjects according to the needs of discipline development and personnel training plans. Through publicity, education and policy incentives, students should be encouraged to choose subjects reasonably and avoid excessive concentration or dispersion of subject selection. For example, for some basic disciplines and disciplines with national strategic needs, special scholarships and preferential policies for college enrollment can be set up to attract students to choose the exam and ensure the balance of discipline talent training. Further study and improve the scoring system algorithm, fully consider the diversity of examinee groups and the volatility of exam difficulty. More scientific and reasonable statistical methods can be adopted, such as the introduction of multi-batch sampling, dynamic adjustment of scoring parameters, etc., to reduce the unfair phenomenon in the scoring process, so that the scoring results can more accurately reflect the actual level and subject ability of students.

The government should continue to increase investment in educational resources in the central and western regions, rural areas and poor areas, and give more support to teacher training, construction of teaching facilities and education informatization. For example, we have implemented a system of exchange and rotation of teachers between urban and rural areas, and selected excellent teachers to teach in rural areas and weak schools. Increase investment in the construction of information infrastructure for rural schools, realize the sharing of high-quality education resources, and gradually narrow the gap between regions and between urban and rural areas. Encourage quality schools and weak schools to carry out inter-school cooperation, through the establishment of educational alliances, group schools and other means to achieve the sharing of teachers, curriculum, teaching management experience and other resources. High-quality schools can promote weak schools to improve the quality of education and promote the realization of equality in inter-school education through distance teaching, teacher volunteer teaching, student exchange and other forms.

7. CONCLUSION

The reform of the college entrance examination system has a profound and complex impact on educational equity. The new round of college entrance examination system reform has achieved remarkable results in promoting equal examination opportunities, diversified comprehensive evaluation, balanced allocation of educational resources and so on, which has effectively promoted the development of educational equity. However, in the process of reform, there are also new challenges, such as difficulty in implementing comprehensive quality evaluation, hidden danger of unfairness in selected subjects and persistent gap in educational resources. By improving the comprehensive quality evaluation system, optimizing the system of selecting examination subjects, narrowing the gap in education resources and other measures, the reform of the college entrance examination system can be further guaranteed to develop in a fairer, scientific and reasonable direction, provide more equitable education opportunities and development platforms for students, and train more high-quality and diversified talents for the country. Promote social harmony, stability and sustainable development.

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