

**REVIEW**

The Equity of Gaokao (National University/College Entrance Examination) in China

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ABSTRACT

Gaokao, the college/university entrance examination, has been playing a decisive role in the access of higher education in China since 1949. This high-stakes examination has received increasing criticisms these years about the contents and forms of the exam. This article briefly examines the development of Gaokao, and focuses on the equity of educational opportunities the examinees can have in different provinces and rural and urban areas, which is the critical way to individual success and the promotion of social mobility. There is inequity of educational opportunities in different provinces as well as the rural and urban areas. The Ministry of Education (MoE) in China has adopted optional examination approaches, inequity, however, arises in them too. Remedial reform is implemented and Gaokao at present is still the effective system while optional system is available.

1. Introduction

The college/university entrance examination in China have been the “only admission requirement for higher education” (Gu & Magaziner, 2016) for several decades. Gaokao as a high-stake examination has developed with controversy, and changes and reforms have been implemented since the founding of the People’s Republic of China in 1949. At present, the National Examination Authority within the MoE has exclusive control of the exam. It is responsible for the coordination and supervision of the exam questions while the lower-level government has the responsibility to print and deliver the exam papers, arrange the exam centers and mark and report the exam results (Davey, De Lian & Higgins, 2007). In other words, it is the Chinese

government that controls and administers the exam. To be successfully enrolled in a university/college, the candidates need to take three compulsory subjects, Chinese, math and English, and two optional subjects from six subjects, which is the “3+X” structure and the “X” is determined by the provinces themselves. For example, if a student wants to study science or engineering, they will need to take physics, chemistry, and biology while history, politics and geography are for those who will major in arts. All candidates throughout China participate in the exam at the same time during the scheduled days. The exam lasts from two to three days in summer while each subject takes two to three hours to complete (Davey, De Lian & Higgins, 2007).

The exam is held once a year. It follows that if failing the exam, the students have no choice but to wait for

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another year. The MoE issues the cut scores every year based on the number of candidates and the capacity of the universities in China. There are two cut scores, one is for prestigious universities and the other is for the admission to universities (Hannum, An & Cherng, 2011)^[1]

There is fixed enrollment quota in every province according to the admission policies. Although some top universities have some autonomy in admission of students, the MoE still makes the ultimate decision in the quotas. "A complex matrix of provincial quotas, university quotas and subject quotas is negotiated annually between universities and provincial authorities" (OECD, 2016, p.12). Besides, the students are restricted by the place of registration (Hukou), which is usually the place of birth. That is to say, they cannot migrant to another province to participate in Gaokao, and the children of the migrant workers have to return to the provinces where they were born to have their education. In other words, the students in every province are allocated with limited number of higher education opportunities (Wang, 2010). Gaokao also influenced the secondary education in China. It is only through Gaokao, the exam that the secondary students can have access to the higher education in China (Davey, De Lian & Higgins, 2007).^[2]

In 2014, there were regular 2542 colleges and universities in China (MoE, 2014). As a high-stake examination, Gaokao determines "who has the right to access higher education and what kind of higher education" (Ross & Wang, 2010, p. 4). The future and even the employment of millions of Chinese students every year are determined by Gaokao in China (Davey, De Lian & Higgins, 2007). Gaokao is considered as "the most important factor affecting equity of access to higher education" (Wang, 2010, p. 15). The number of exam candidates reached 7 million in 2005 (Davey, De Lian & Higgins, 2007) while the number was 9.5 million in 2015 (Gu & Magaziner, 2016). Gaokao influences millions of households in China and its equity should be ensured to allow the candidates to have equal access to higher education. This article reviews the development of Gaokao and critically examines the equity of it, and the remedial reform of Gaokao. The critical review is not only beneficial to the university/college entrance examination but also benefit the students in different provinces in China.

2. The Development of Gaokao in China

In 1905, the imperial civil service examination (Keju) which was originated in Sui dynasty in 587 and lasted for 1300 years to recruit intellectuals for the imperial administration was abolished. There was only one subject

in imperial examination, writing to demonstrate the candidates' knowledge in Confucian classics, so as to serve the imperial governments. In 1949, the establishment of the People's Republic of China, there were only 180 higher education institutions in China with 80, 000 students enrolled (Pepper, 1978), and these institutions had their own right and criteria to admit university students. It is in 1952 when "a nationwide centralized or unified student recruitment and admissions policy for all the colleges and universities throughout the country" (Yang, 1993, p. 6) was implemented.

During the Cultural Revolution (1966-1976), Gaokao had been canceled and the universities had been systematically closed. In 1977, after the Cultural Revolution, China reestablished its education system and restored Gaokao with the ideal that the system of grades would be the only criterion for access to the higher education (Ross & Wang, 2010; Gu & Magaziner, 2016). According to Yang (1993), the unified admission plan was issued by the MoE to each province and all the candidates took a unified academic examination.

Since the opening and reform of China in the 1980s, Gaokao has also undergone a series of reforms. For example, Gaokao has been localized in 16 provinces since 1985 (Gu & Magaziner, 2016). In other words, the contents of Gaokao vary in different provinces. In 2014, the MoE issued the changes in Gaokao, such as English exam will be offered twice a year instead of once in a year, and the universities can award bonus points to the candidates and adapt their admission criteria. In 2017, the MoE issued that most of the provinces will have the same standardized examination in Gaokao.^[3]

3. Criticism on the Inequity of Educational Opportunity of Gaokao

3.1 Equity of Educational Opportunity

Equity is about "ensuring that there is a concern with fairness, such that the education of all learners is seen as having equal importance" (UNESCO, 2017, p.13). In 1968, James Coleman in his report stated the equity of educational opportunity in the United States, which is considered as the milestone for understanding the theory and practice. Equity of educational opportunity plays a fundamental role in the provision of "ladders of opportunity" and promotion of "upward mobility" for "socially disadvantaged students" (Jacobs, 2016, p. 314). According to Meyer (2016), equity of educational opportunity is a controversial issue in society, though it is the most important approach to realize the acquisition of social resources which is distributed unequally, and it is also

crucial in the advocating of educational justice. Everyone in the society is entitled to equal opportunities in the participation in higher education and the competence for social resources, which is the foundation for the existence of Gaokao (Zheng, 2010).

Gaokao as the only criteria for the attainment of higher education resources has received criticisms from different aspects. Ross and Wang (2010) stated that Gaokao is criticized because it is considered as the barrier to hinder the reform of the system and the innovation of knowledge. Besides, it reduces the schools to mere competition of grades, and unfairly benefit the students in the urban areas rather those in the rural areas. They examined seven articles and discussed the inequity between different genders, rural and urban students and ethnicities. Gaokao has received increasing criticism recently in China in provision of equal opportunities in education.

According to Wang and Ross (2010), Gaokao brings about opportunities for success and social mobility, which is especially attractive to the students in rural areas where opportunities are scarce to improve their well-being and lives economically. “The CEE (College Entrance Examination) also still remains the best and in many cases only avenue to postsecondary education for most students” (Wang & Ross, 2010, p. 91). Despite the criticism about the increasing stratification of Gaokao, students and their parents in rural areas still support the ideal belief about Gaokao in its promotion in social mobility.

3.2 Education Opportunities among the Provinces in China

Inequity exists in different regions in China (Fan, Kanbur, & Zhang, 2009). Higher education inequity also

Table 1. The Higher Education Entrants, Normal Courses Enrolment, and the Ratio between the Two in Different Provinces in China in 2016 (Data Supplied by National Bureau of Statistics of China)

Provinces	Entrants	Normal courses	Ratio	Provinces	Entrants	Normal courses	Ratio
Anhui	307395	160469	0.52	Jiangxi	295980	135137	0.46
Beijing	151150	127715	0.84	Jilin	173218	118753	0.69
Chongqing	204887	111571	0.54	Liaoning	255721	166002	0.65
Fujian	197740	117999	0.60	Ningxia	32353	19486	0.60
Gansu	125813	72261	0.57	Qinghai	19063	9235	0.48
Guangdong	539813	275080	0.51	Shandong	555211	262746	0.47
Guangxi	248411	114813	0.46	Shanghai	137458	93146	0.68
Guizhou	186996	81540	0.44	Shanxi	203651	119819	0.59
Hainan	53176	28021	0.53	Shaanxi	283555	161016	0.57
Hebei	357918	182061	0.51	Sichuan	414747	218165	0.53
Heilongjiang	197846	126134	0.64	Tianjin	139027	85066	0.61
Henan	550127	256193	0.47	Xinjiang	92191	42281	0.46
Hubei	390697	212750	0.54	Tibet	10143	5993	0.59
Hunan	349431	173177	0.50	Yunnan	179949	100628	0.56
Inner Mongolia	121850	62560	0.51	Zhejiang	257892	145368	0.56
Jiangsu	452701	268822	0.59				

exists which conforms to the regional inequity in income (Shah, Zhang & Zou, 2005). Qian and Smyth (2008) stated that education disparity does exist between the urban areas in the east coastal provinces and in-land provinces.

According to Davey, De Lian and Higgins (2007), major cities such as Beijing, Shanghai have the most universities, especially the first-tier universities, so the candidates there can be admitted with lower scores than those in other provinces. For example, students from Beijing who are enrolled in undergraduate studies account for 84% while proportion from Guizhou, a non-coastal and backward province is only 44% percent.^[4]

Wang (2010) conducted a meta-analysis and examined whether Gaokao distributed the higher education opportunities equally among the provinces in China. First, the research examined the index of entry opportunities based on the quota of every province and concluded that the fixed quota policy caused the widening discrepancies in the prestigious university admissions between the developed and undeveloped areas. Davey, De Lian and Higgins (2007) also revealed that the top universities in China are mainly located in central cities such as Beijing and Shanghai where the candidates as residents are privileged to be enrolled in the prestigious universities compared with candidates in other areas.

Then the “province-specific college entrance examination questions” were adopted in Gaokao (Wang, 2010, p. 22). However, Wang (2010) conducted a survey to examine the attitudes of teachers from universities and high schools towards this using questionnaire. Results showed that about 70 percent of them expressed negative attitudes towards the equity of these questions and favored national questions.^[5]

3.3 Education Opportunities in Rural and Urban Areas in China

Gaokao plays a decisive role in the types of education the students in the rural areas receive. To some extent, Gaokao reinforced inequalities in education (Hannum, An & Cherng, 2011). Qiao (2010) examined the disparity existed between the urban and rural students' opportunities to access higher education from 1996 to 2005. Findings demonstrated that there were marked differences between the two groups' opportunities to access higher education while the urban enrollment rate was higher. The disparity between the two groups was even considerable in the prestigious universities in China. “The enrollment rate of current rural students has always been lower than the overall enrollment rate” (Qiao, 2010, p. 23). According to Qiao (2010), narrowing the

gap between the urban and rural education not only has a positive effect on urbanization of rural areas but also on the reducing the disparity between urban and rural areas. Furthermore, students in the urban secondary school have advantage over their peers in the rural areas (Wang, 2010).

Hannum, An and Cherng (2011) conducted a case study in the rural area of Gansu province following 2000 young people in one hundred villages in Gansu province. Findings showed that it is more likely for young people with wealthier background to enter universities. Besides, the contents of examination incorporate more urbanized topics, which disadvantages the examinees in rural areas (Zheng, 2010).^[6]

3.4 Recommendation Admission Policies

It is Gaokao that determines the majority of students' entering universities/colleges; however, some students can be admitted in to the top universities through recommendation (Davey, De Lian & Higgins, 2007). As a higher education reform, the independent admission or enrollment policies were proposed and implemented. Even though the number of these students is small, there are still concerns about its equity.

The family background of the students enrolled in the universities under the “independent enrollment policies” (Wang, 2010, p. 23) was examined. Findings based on recommendation enrollment statistics from 1995 to 2005 revealed that recommendations favor students from families with rich social and economic resources, which can be manipulated by external factors. And data demonstrated that students whose parents with high social status are more likely to access high-quality education, and the disparity is increasing (Wang, 2010). Liu, Wagner, Sonneberg, Wu and Trautwein (2014) also examined the independent admission policies based on the administrative data from Peking University in China. Data from 20,548 applicants were examined and findings showed that there was significant relationship between the students' socioeconomic background and their admission into Peking University, one of the best universities in China. The independent admission system is conducive to the students from high socioeconomic origins than those from lower ones.^[6]

These special admission policies tend to generate inequity among the students with different social and economic backgrounds. Wu (2017) conducted a panel survey among the college students in Beijing and investigated the social stratification in higher education. Data showed that social and economic conditions impacted their possibilities to access higher education. Besides, special

admissions policies obviously are beneficial to students from advantaged family backgrounds. The survey study by Liu (2013) examined 960 undergraduate students in different types of universities from two provinces in China. Findings showed that socioeconomic backgrounds can influence the students' academic achievement, thus affect their enrollment in different types of universities. Besides, socio-demographic factors exert even greater influence than socio-economic ones. Students from rural areas suffer from its low socio-economic and enjoy fewer opportunities to enter elite universities.^[8]

In conclusion, different policies related to Gaokao have been tried to reform the exam. However, policies, such as different exam questions in different provinces, independent admission policies, etc. have to some extent generated inequity among the candidates, especially between the urban and rural areas, as well as between candidates with high socio-economic status and those with lower socio-economic status.

4. The Remedial Reform of Gaokao

Gaokao is "the fundamental examination and selection system of Chinese higher education" (Liu, Wagner, Sonnenberg, Wu & Trautwein, 2014, p. 44). Gaokao is a system examination which renders it impossible to have complete reform because it would influence the majority of the students in the whole country and also because the prevailing form of Gaokao has been based on the cultural and political foundations and fulfills its certain social functions, so remedial policies and strategies are recommended and examined by the researchers to improve equity of Gaokao (Ross & Wang, 2010).^[9]

Li, Zhou and Fan (2014) conducted an empirical research and examined the equity of distance higher education among different provinces because the higher education opportunities have been allocated to provinces in China from 2003 and 2008. Findings showed that equity of distance higher education among different provinces has had modest improvement during these years. The government is suggested to provide financial support, such as scholarships and loans to the students in distance higher education in poverty-stricken students and groups. Qiao (2010) proposed that "a unified welfare distribution system" (p. 30) should be established and the urbanization of rural areas should be promoted so that the disparity between elementary schools in the urban and rural areas can be reduced. There are relatively less empirical researches on the remedial reform of Gaokao, so more studies will be needed to address this problem.^[10]

5. Conclusion

According to Zheng (2010), despite the criticisms of Gaokao, its foundations still exist. The socially disadvantaged population, especially those in rural areas has the opportunity to compete for social resources in education, which motivate the social development. In other words, the social basis for Gaokao still prevails. Rational understanding and reform of Gaokao is needed to improve it while no better examination system is unavailable now in China.

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