

# **Analysis of the influence of China's new college entrance examination reform on after-school training industry and educational informatization**

TingYu Sha

Xi'an International Studies University, No. 6 Wenyuan South Road, Chang'an District, Xi'an City, ShanXi Province

398499194@qq.com

**Keywords:** New college entrance examination reform, Chinese training, Discipline competition, Educational informatization, Online education, Consultation service.

**Abstract.** The paper focus on explaining the contents, schedule and target of China's new college entrance examination reform and analyzing its influence on educational industry which mainly contains after-school training, educational informatization and online education. To promote the fairness of education, in September 2014, the new college entrance examination reform is launched by Chinese Ministry of Education, and the new college entrance examination system will be fully established in 2020. By implementing "3+3" elective subjects examination system, the new college entrance examination reform gives greater autonomy in admission to colleges, while students are given greater autonomy in school choice. The paper shows that the new college entrance examination reform will increase the importance of Chinese training and discipline competition training, expand the market of educational informatization products such as the courses arranging software, intelligent class cards and matched wristband, and promote the development of online messaging service, helping students in educational career planning, independent admission and school choice.

## **1. Introduction: New college entrance examination reform**

### **1.1 Content**

In September 2014, the Council of State issued the "opinions of the Council of State on deepening enrollment system reform", which kicked off the the new college entrance examination reform.

#### *1.1.1 enrollment plan*

(1) increase the enrollment rate of college entrance examination in central and western regions and populous provinces; (2) increase the number of rural students attending key universities; (3) improve the enrollment methods of primary and secondary schools and solve the problem of school choice.

#### *1.1.2 contents and methods of the examination*

(1) cancel the division of students into different tracks in high school and students can choose any three elective subjects if their scores are satisfactory. (2) students can take English tests more than once each year, and only the highest score will be counted. (3) improve the academic performance examination and students should learn all nine subjects and take tests. (4) standardize the comprehensive assessment of students' qualities. (5) promote vocational college classification examination. (6) change the grading system. Based on the announcement of Education Department of Zhejiang province, students' scores will be divided into five ranks according to the percentile, and then converted into the standardized scores.

#### *1.1.3 enrollment and admission*

(1) eliminate some preferential provisions that award bonus points to total score. (2) standardize the independent admission system. (3) improve admission methods and gradually cancel the college admission batch. (4) pilot the credit conversion between ordinary colleges, higher vocational colleges and adult colleges.

### **1.2 Reform schedule**

In 2014, the Council of State put forward the overall implementation plan of the new college entrance examination reform: In 2014, the pilot reform of the college entrance examination was launched, and

in 2017, it was carried out in an all-round way. By 2020, the classified examination, comprehensive assessment and multivariate admission will be basically established.

### **1.3 Target of reform**

The new college entrance examination reform aims at promoting the development of students and the fairness of education, and giving greater autonomy to high schools and colleges.

(1) For students, the reform has expanded subject, major and school choices, and changed the situation of evaluating students based on scores alone.

(2) High school faces new challenges in management: how to arrange teaching resources and how to improve the school's administrative management system and evaluation system.

(3) Colleges and universities are given greater autonomy in enrollment, admission and school management. To the extent that it removes the disadvantages of "enrolling students by scores alone". Colleges and universities can set enrollment standards according to different professional requirements.

(4) The new college entrance examination reform has positive impact on eliminating such unfair factors as educational resources being unevenly distributed and fraudulent enrollment, facilitating the realization of educational fairness and social equity.

## **2. After-school training industry: Chinese becomes crucial and discipline competition is the core of the independent admission.**

### **2.1 After-school training institutions continue expanding Chinese training service while the importance of Chinese is growing.**

The new reform system decreases the score gap in elective subjects by giving high-school students opportunities to choose the elective subjects they're better at, therefore the compulsory courses score has a stronger influence on their overall results. Math is in a lower degree of difficulty as the division of students into different tracks in high school has been canceled, and students can take English tests two times each year and only the highest score will be counted. Instead, Chinese increases the difficulty and becomes the most competitive subject to classify the students into different levels. Taking the 2017 college entrance examination results of Zhejiang province for example, there is little difference in the scores of the top ten students in math and English, and the average scores of the two elective subjects are close to perfect grades. However, there is a big gap in Chinese scores. 132 is the highest while 123 is the average score of the top ten students.

Under such a situation, Chinese teaching gradually extends to every fields of life from class. It aims more at cultivating Chinese comprehensive capabilities from four parts: language, thought, aesthetics and civilization.

The enhanced status of Chinese gains more room to grow in educational training industry. At present, the total number of primary and secondary school students in China is about 180 million. It is estimated that the Chinese after-school training penetration is 5%, 8% and 10% in 2018-2020, and the tuition of Chinese training is 10,000 yuan/year, 11,000 yuan/year and 12,000 yuan/year. The Chinese training market in 2018-2020 is about 90 billion yuan, 144 billion yuan and 200 billion yuan.

Many educational institutions begin to research and develop Chinese curriculum. SiQuan Chinese was launched by GaoSi Education (870155.OC), which concludes Chinese products of Giant Chinese Education were also its important products. In 2017, the name of "Dong Xue Tang Chinese" was changed to "Learn And Think large Chinese". In 2018, Excellence Education, TAL.N and Beijing No.4 Network Middle School have launched the product system of Giant Chinese Education. In addition, Lanxum (300010.sz) acquired the famous enterprise the Future of Chinese to explore the Giant Chinese Education market in the future.

TAL Education Group, an enterprise owned by TAL.N, creates a programme "golden three rings" of Chinese training: (1) the curriculum is designed for the junior, middle and senior grades, and each grade covers different literary readings. (2) graded reading is mainly for children aged 6 to 12. The bibliography mainly covers humanities and art, literature, science and traditional culture. (3) the

application of this programme improve students' practical ability from three educational activities: Humanities Travel, Literacy Courses and Quality Activities .

Lanxum (300010.sz) acquired the Future of Chinese which is the leading enterprise in the field of Chinese education and owns the most advanced Large Chinese product in the K12 educational training market. The product "zhuge school" offers online courses through the mode of "broadcasting plus recording", covering sinology, enlightenment education, children's literature for junior students, and ancient literature, foreign literature and advanced writing for senior students.

The "zhuge school" product has now covered 300 cities in China and nearly 100,000 students, and the price of the course is about 100 yuan/hour. In the future, it will offer online Chinese products for primary and secondary school students nationwide. Currently, the price of ordinary offline courses is 100 yuan/hour, while the price of high-end courses is around 200 yuan/hour.

## **2.2 Instruction for independent admission becomes a necessity.**

The new college entrance examination reform gives colleges and universities greater autonomy in enrollment, and the proportion of independent admission continues to increase. In 2018, 6,700 students are expected to enroll in Tsinghua University and Peking University, and the number of students who have admitted with lower scores has reached 91.54%.

There are a mass of information and various demands of independent admission in different colleges and universities, so it's necessary for students or their parents to find professional guidance. Independent admission guidance contains materials preparation, written tests and interviews, helping students with background improvement, material application, written test and interview skills.

For example, the independent admission simulation system of Century-Old Talent Education provides the simulated online application system, as well as the online application of comprehensive evaluation enrollment, special college enrollment plan, high-level sports teams and art students.

## **2.3 Discipline competition training**

Discipline competition, mainly involving five subjects such as math, physics and chemistry, is considered as the most pivotal section of independent admission. About 3 million people sign up for the discipline competition every year, and the winning rate of the discipline competition is about 2%~3%. According to the survey, it is assumed that the proportion of the students who apply for the discipline competition in 2018-2020 to participate in the competition training is 5%, 7% and 8%, and the costs of the competition training in 2018-2020 are about 15,000 yuan, 17,000 yuan and 18,000 yuan. The market size of the tutoring for high school discipline competitions in 2018-2020 is estimated to be about 2.5 billion yuan, 3.5 billion yuan and 4.3 billion yuan.

The central problem of the discipline competition training is the lack of professional teachers and advanced teaching system. One factor is that the difficulty of the competition requires the academic expertise of teachers, and the other factor is that the incomplete implementation of online teaching leads to low teaching efficiency.

Ipoweru has established a set of discipline competition system to provide discipline competition and independent admission training courses and create the idea of hierarchical teaching with the aim of helping students be admitted by colleges with lower scores line. As is reflected by table 1, the educational training system of Ipower is to select some students with great school performance participating in discipline competition training and classify them into three levels. Students who are eligible will continuously participate in further competition training, while others will learn the ordinary courses of independent admission.

**Table 1. Ipoweru’s idea of Hierarchical teaching**

Schedule	Training method	Classification		
The first semester of tenth grade	Daily discipline competition training	Excellent students		
The second semester of tenth grade, eleventh grade	Hierarchical teaching	Ordinary level	Middle level	Top level
Twelfth grade	Individuality Analysis and personalized training	Being admitted by 985 project universities and 211 project universities with lower scores line	Being admitted by key universities such as Qsinghua Universities, Peking Universities and Fudan Universities with lower scores line	Being recommended for admission to Qsinghua Universities, Peking Universities, etc.

**Note:** data come from the Ipoweru website.

### 3. Educational informatization

#### 3.1 The soaring demand for courses arranging in mobile classes system

The new educational reform has produced 20 kinds of course selection combinations. The diversification of course selection and the dynamic change of course schedule made teaching resource allocation, information guidance and class management become the core requirements, and promoted the emergence of new types of products and services such as intelligent class cards, courses arranging and course selecting systems. The mobile class system adds the requirement of the number of classrooms, teacher resources, students attendance and campus security management.

#### 3.2 Hardware: intelligent class cards and attendance management

As a visual information platform, intelligent class cards are available for high schools to publish and manage different types of notices such as text, video, pictures and live broadcast. Its matched wristband is used for students to check their personal schedules and school notices. At present, there are 27,000 high schools in China, and the unit price of intelligent class cards and wristbands is around 5000 yuan and 200-300 yuan respectively. It is estimated that each high school has 50 classes which average about fifty students, and 30% of students wear the intelligent bracelets, so the market of intelligent class cards and matched wristband is around 10 billion yuan.

CVTE (002841.SZ) Seewo intelligent class card provides efficient information service for campus management: (1) generate personalized schedule. (2) store and manage teaching data; (3) examine students attendance; (4) Flipped Class Model: the teacher posts the contents of courses for students to check the point of lesson and homework, and students can submit the feedback after class through the intelligent class card.

The intelligent attendance system of Jiafa Education (300559.SZ) offers intelligent attendance service, which is particularly designed for the mobile classes system developed in the new college entrance examination reform.

#### 3.3 Software

The mobile classes system and limited teaching resources increase the complexity of courses arranging. Courses arranging service can use the optimal clever algorithm to generate a schedule that meets the needs of students and high schools. Now there are 27,000 high schools in China, and the expected investment of each high school in courses arranging service is 100,000 yuan/year. So it is estimated that the market of courses arranging service is 2.7 billion yuan/year.

The Cloud-base Smart Education Solution of Jiafa Education (300559.SZ) has the following functions: (1) courses arranging classification: arranging courses selected by students according to the requirements of the new college entrance examination reform. (2) customized class settings: consider the differences between classes and meet other special requirements. (3) artificial adjustment: teacher can reallocate or adjust the schedule according to special circumstances. (4) diversified schedules: different class schedules are displayed for teachers, classes and students. (5) algorithm compatibility: it can provide courses arranging for various requirements. At present, the unit price of courses arranging service launched by Jiafa Education is 100,000 yuan/school/year, with steady service continuity and clients.

## **4. Online education and consultation service**

### **4.1 The increased demand for messaging service**

Students' expanded choices spurred the soaring needs for messaging service. The new college entrance examination reform makes it essential for students to plan their educational career, and students should take their interest and career planing into consideration when choosing elective subjects and major in college. However, the high school students lack knowledge about self-capability and college major, while the teachers can only give limited information about the enrollment and admission system of college to students. So optimal solution for students is to find help from educational advisory institutions, which offer online tests to assist students in educational career planning.

### **4.2 Educational career planning**

Career planning tutorship is an absolute necessity for high school students while most schools lack the resources of career planning courses. Almost all the ordinary parents and students are unfamiliar with career planning, and teachers have barely paid attention to this field so the information they can offer is just incomplete theory.

The function of online platform is to integrate the information about enrollment and admission system and analyze the current situation and future trends of major, giving students appropriate guidance in educational career planning by offering diversified messaging services.

### **4.3 Messaging service for independent admission**

Messaging service can integrate and analyze different independent admission requirements for high school students to help them choose colleges and universities. In addition, online messaging service is more efficient which can take full advantages of the internet and big data, offering students the information about registration, written examination, interview and exam results announcement and suggestion of school choice. These online messaging service platforms also present articles in their websites to share useful educational information with teachers, parents and students.

### **4.4 Guidance on school choice**

The pressing needs of high school students and their parents is scientific guidance on school choice while the new college entrance examination reform increases the difficulty of choosing colleges and universities. Without robust regulation, the present situation of domestic messaging service market is nonstandard and unprofessional. In the future, the market will be continuously integrated and centralized, and enterprises with big data ability, professional ability and planning ability will stand out from the competition.

The intelligent school choosing system of Century-old Talent Education collected more than ten years of college entrance examination data and analyzed of enrollment and admission system to provide a benchmark and suggestions for students' school choice. Users can search for relevant information on the basis of their interests (including schools, majors and occupations), or directly search for the most suitable schools according to the score line and their ranking.

Based on the strategy of "Internet plus career planning education", 51 Xuanxiao Education provides a complete set of career education system which contains teacher training, experience courses, career development center and other products to build a comprehensive career education service platform. Its evaluation system involves potential development test, career interest test and professional work value test, combining the database of career, professional and college to help students determine their future plans.

## **5. Summary**

The paper draws a conclusion by analyzing China's new college entrance examination reform: the new college entrance examination system is propitious to extending the autonomy of colleges and students, and promoting the fairness of education. The status of discipline competition and Chinese in

after-school training industry has been enhanced, while the messaging services for new college entrance examination system has become a potential growth area in educational informatization industry. The author considers that the changes of education policy and the fierce competition may lead to the decline of the profitability of education companies and the shortage of education funds in some provinces, which may become the risks of the new college entrance examination reform.

## **References**

- [1] Xiongying L I, Leng W, Sun Y, et al. Comprehensive Evaluation:A New Orientation of the Reform of the College Entrance Examination[J]. *Journal of Higher Education Management*, 2016.
- [2] Zhang, Yu. National College Entrance Exam in China[J]. *Springerbriefs in Education*, 2016.
- [3] Zhang Y. History and Future of the National College Entrance Exam (NCEE) in China[J]. 2016.
- [4] Zhang, Yu. [SpringerBriefs in Education] National College Entrance Exam in China || *History and Future of the National College Entrance Exam (NCEE) in China*[J]. 2016, 10.1007/978-981-10-0510-7(Chapter 1):1-15.
- [5] Zhang, Yu. National College Entrance Exam in China[J]. *Springerbriefs in Education*, 2016.
- [6] Yu Z . Summary and Policy Suggestions[M]// *National College Entrance Exam in China. Springer Singapore*, 2016.
- [7] Wang Z, Shi Y. Prediction of the admission lines of college entrance examination based on machine learning[C]// *IEEE International Conference on Computer & Communications*. 2017.
- [8] Jia R, Hongbin L. Access to Elite Education, Wage Premium, and Social Mobility: Evidence from China's College Entrance Exam[J]. *Social Science Electronic Publishing*, 2017.
- [9]Yuan Y. Life-Changing Exam Memories of different generations on China's national college entrance test[J]. *Beijing Weekly (English Edition)*, 2017, 60(25):37.
- [10]Hyman J. ACT for All: The Effect of Mandatory College Entrance Exams on Postsecondary Attainment and Choice.[J]. *Education Finance & Policy*, 2017, 12(5):1-69.