

Overview of High School Education Reform in Sweden and China

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Abstract: Starting with the background of Swedish high school education reform, this paper analyzes the Swedish education reform system and illustrates the basic situation of Swedish education reform. At the same time, compared with the background of high school education reform in China, as well as the policies and systems of the new college entrance examination and the new course, the situation after the reform of our school is compared with the Swedish schools, causing deep thinking.

1. High school education reform background in Sweden

In the whole process of education, high school education plays a role of connecting the preceding and the following. It is not only related to the personal development of each student and the development of each family, but also related to the development of a country's education level and the overall quality of the people. Realizing this importance, Sweden has carried out a series of educational reforms according to its national conditions, with fruitful results. According to the Swedish Education Law, high school education is the continuous development of compulsory education. Based on compulsory education, high school education attaches great importance to individual development, helps them find the correct life orientation, and lays a good foundation for entering the society to become useful talents to the country and society in the future.

Prior to the 1970s, high school education in Sweden was divided into senior secondary schools and vocational schools. Different types of people have clear boundaries between schools, and students and courses are relatively closed and disconnected. Different types of schools limit students' future development and direction of employment, so that students can limit their future from high school. It also stipulates that only regular high school graduates can enter universities for higher education. The final result of this restriction is a school with the main purpose of admission. If students do not want to continue their study after graduation, they cannot find employed, while for the purpose of employment, even if students have the desire to learn, they have no desire to study ability. This overly clear education system caused the dissatisfaction of many parents and students at that time, but it also did not meet the needs of social, economic and scientific and technological development. Accordingly, Sweden has undergone a series of reforms.

From 1960 to 1971, Sweden has been carrying out the reform of high school education, after continuous exploration and improvement, Sweden established a new type of comprehensive high school, making Sweden's high school education reform in the forefront of the world [1].

2. The specific content of the high school education reform in Sweden

2.1 What is a comprehensive high school?

Comprehensive high school not only pays attention to students' future education, provides opportunities for systematic theoretical learning, but also pays attention to students' employment, and provides opportunities for practical education.

2.2 Curriculum setting of a comprehensive senior high school

The comprehensive high school has changed the simplicity of the traditional high school and carried out a very flexible curriculum. Many courses of different disciplines are offered to adapt to the development of students and society and cultivate talents in the needs of all walks of life. There are usually 30 professional courses, ranging from two years to four years.

(1) A school provides multiple types of courses, and shares education and teaching resources.

(2) Different subjects have a common teaching plan, including subjects that students learn together, and different subjects.

(3) Whether it focuses on college education or employment, the purpose of its teaching is to improve students' personality and do a good job in career planning.

(4) Students can freely switch to majors or even to disciplines. The integration of general education and vocational education has become a major feature of Swedish high school education.

2.3 Combination of theory and practice

Comprehensive high school emphasizes the combination of theory and practice, and pays attention to the cultivation of practical ability in practical work. Therefore, the various equipment and facilities of the laboratory, practice workshop and repair assembly workshop of comprehensive high school are very perfect. The proportion of theoretical learning and practical time in comprehensive high school is 1:1. Graduates of comprehensive high school can go to school and obtain direct employment. High school graduates, regardless of which system and subject, can study [2].

2.4 Allocation of teachers

Comprehensive high school is equipped with high-level teachers, which not only have a good theoretical basis but also have practical work ability. Comprehensive high school attaches great importance to practical training, and teachers of technical and vocational subjects should first have the quality in this aspect. Teachers will keep in close contact with factories and enterprises, do a good job of research and learning, and constantly improve themselves to meet the needs of students and social training for talents [3].

Sweden's education reform enabled the rapid integration of basic education and vocational education, and accelerated the process of education reform. Combine the theory of senior high school education with the practice, and pay equal attention to the knowledge transmission and the ability cultivation. This reform has increased the quality of education and teaching in Sweden, and is the proud "work" of Swedish educators [4].

3. The reformed Swedish Helby High School

3.1 Diversified courses and course selection system

Sweden's high school curriculum is basically divided into three parts: core courses, learning programs and related courses, and individual choice courses.

(1) The core courses are compulsory courses, accounting for 1,400 credits of the university, including 8 subjects: Swedish Language, English, Mathematics, History, Physical Education and Health, Nature knowledge, religion knowledge, and social knowledge.

(2) The courses of the learning project are formulated according to the characteristics of the project, and are divided into compulsory and elective courses. Sweden has a total of 16 national learning programs, corresponding to 16 categories of college enrollment. Herby High School is more famous in the local area, offering three learning courses in natural science, social science and economics.

(3) Individual choice courses are the courses of university cooperation projects, which students can choose freely.

(4) High school subject courses in Sweden are taught in different levels, and courses are set up according to different needs.

(5) High schools in Sweden implement the class teaching mode. Individual choice of courses not only to do research but also to write papers, theory and practice are closely combined. The choice of courses is completely decided by the students, and according to their own preferences and characteristics. The teaching method brought by this course selection mode is class teaching, just like our college teaching method.

3.2 Characteristic project courses with a hundred flowers blossoming together

Schools in Sweden, regardless of their nature (public or private), can apply to comply with relevant national requirements. For example, Helby Middle School in Stockholm, founded in 1913, has a good reputation and influence in the society due to its practical school-running style. Schools can apply to open their own national learning program. At present, the university offers three national learning project courses in natural science, social society science and Economics. In 2005, the social science teachers of the school proposed to the school to do China projects. The school hired Chinese teachers to offer Chinese courses at the same time, organized mutual visits between the cooperative school students, visited China, did their own research topics, and invited celebrities to give speeches in the school. The school supports and arranges task-based learning content from Chinese learning in the school, and requires students to understand and study the characteristics of Chinese history and culture and the characteristics of social and economic development through field visits. The China program courses of Helby High School not only meet the needs of students to learn Chinese, but also give them a deep understanding of Chinese culture, but also greatly enhance the popularity and influence of the school [5].

3.3 School education management and evaluation examination

After the merger of Swedish academic high schools and vocational high schools, Sweden has no strict so-called college entrance examination. The admission of a university is to apply for admission according to the credits of high school. As long as you complete 90% of the 2500 credits in high school, you can go to college. Some universities have the requirement of interview.

4. Background of senior high school education reform in China

Since the resumption of the college entrance examination in 1979, China has carried out many high school education reform, the main purpose is to get rid of the shackles of exam-oriented education. From the beginning of universal education to the later improvement of education and teaching level, not only requires quantity and quality, constantly seek for balance and breakthrough, and finally to find a high school education model suitable for the development of China's national conditions, to cultivate more suitable talents for the country.

As a result of the past few years that the pursuit of high education, parents want their children to be admitted to college, do white-collar, and make the technical work is facing no one, so, the country put forward the "high school entrance examination diversion" policy. The high school entrance examination diversion, so that students more suitable for academic research can go to universities for scientific research, so that technical talents can go into practice to improve technology and innovate technology to deal with the vacancy of talent reserve in China's current high-end industry. Let the students into the society to become all walks of life really need the talent. Students who follow the technical path can also take the college entrance examination to enter universities and learn deeper and more sophisticated technology.

5. The specific content of senior high school education reform in China

On September 4, 2014, the state officially issued the implementation opinions on the reform of the examination and enrollment system, and China's high school education reform was carried out from the two aspects of curriculum reform and college entrance examination reform. Since 2014, all provinces have begun to enter the team of the new college entrance examination reform.

5.1 Reform of senior high school education

5.1.1 Reform of college entrance examination

Taking the "3 + 1 + 2" model of Liaoning Province as an example, the total score of candidates is divided into two aspects: the unified examination subjects and the selective examination subjects, with a full score of 750 points. The unified subjects are Chinese, mathematics and foreign languages, and the selective subjects are physics, chemistry, biology, politics, history and geography. The final scores of the elective test subjects were calculated as a percentage of the score ranking rather than the volume score. Among them, history and physics are the preferred subjects, choose one of the two, determine the direction of partial literature and theory, chemistry, biology, politics, geography as the secondary subjects, choose two of the four. There are 12 combinations according to the different subjects type.

This model improves the status of physics and history. The knowledge structure of physics is more broad for thinking exercise and university major choice. And history plays an important role in cultivating humanistic quality. This is conducive to colleges and universities to select more appropriate talents. Many ace majors in college enrollment have set up the required subjects, so as to more accurately position the talents trained by the future education of universities.

For students, from the two combinations of "arts and science" to the combination of "3 + 1 + 1 = 12", which stimulates students' interests and learning potential and also more flexible. While retaining a certain selectivity, the limited selection of "1" is also conducive to reducing the difficulty of students to give up and avoid choosing physics, leading to the decline of the overall literacy of physical science.

In addition to the college entrance examination subjects, high school students to attend the

academic level qualified exam, qualified exam set the language, mathematics, foreign language, physics, chemistry, biology, history, geography, politics, art (music, art), physical education and health, technology (information technology, general technology), and all kinds of experimental test, etc. Students who have passed all the subjects of the academic level qualification examination can obtain a high school diploma, while the six subjects of the college entrance examination can only pass the college entrance examination.

In addition to the summer college entrance examination, each province has its own spring college entrance examination (higher vocational single entrance examination), for some students who are not ideal, you can participate in the separate enrollment examination organized by the province, the admission college for the provincial college [6].

5.1.2 Curriculum reform

In view of the new college entrance examination, it brings a new way of talent selection, and then puts forward the new curriculum reform, reorganized the knowledge system of high school curriculum, and printed the most printed new textbooks to guide students to learn and teachers' teaching.

The guiding ideology of the new curriculum reform is to make teachers go from teaching courses to teaching courses, research, design and development courses, and make students become the main body of the course. Teachers can guide students, so as to trigger students to think and cultivate students' independent learning ability. The relationship between teachers and students becomes a barrier for collaborators department, work together to learn this thing well, to achieve teaching and learning.

5.2 Curriculum setting and examination of secondary vocational colleges and universities

The courses of secondary vocational colleges are divided into two aspects: cultural courses and professional courses (the cultural courses include Chinese, mathematics and English). Vocational high school students can also take the gaokao. To take the spring college entrance examination (about April of each year) in the way of matching college entrance examination, providing excellent secondary vocational students with opportunities to further college study. The examination subjects include Chinese, mathematics, English and corresponding professional basic courses. After being admitted to a university, I will continue to study in this major for [7].

6. Basic situation of our school after the reform

In 2018, Liaoning province, as the third batch of gaokao reform province, implemented the new gaokao policy. Our school has carried out a series of adjustments for the reform of the college entrance examination.

6.1 The implementation of the course selection and class selection system

In view of the "3 + 1 + 2" mode of the new college entrance examination in Liaoning province, the system of course selection and class walking is adopted, which is divided into administrative classes and class walking classes. The administrative class is determined according to whether the preferred subject is history or physics, and the head teacher and all the management are fixed in the administrative class. The selected classes are distinguished according to the re-selected subjects, involving the selected courses to the selected class teachers, and the moral education teachers and the class teachers are responsible for the management.

In the course of three years in high school, selective subjects can be changed. Students can

request the school to change to choose the course according to their actual learning situation. After approval, it can be changed. The examination subjects are finally determined before the registration of the college entrance examination. The elective subjects cannot be changed after the registration of the college entrance examination.

The flexible course selection and class walking system can better enable students to find their own positioning and their own expertise, and correct them in the learning process. The selected subject means the general direction of the university and the direction of the future work. Accurate positioning is crucial for students [8].

6.2 Assistance and guidance of career planning

For the new reform, we are all trials. No one is really experienced, so career planning plays a vital role in this process.

The purpose of the reform is to train professional talents in all aspects more effectively, so that students can find the right life orientation earlier, reduce the possibility of changing their careers after graduation in the future, and reduce the waste of the talents trained by the country.

When freshmen enter a high school, our school conducts a series of psychological tests, such as the Holland Career test, and feedback the evaluation results of students to the homeroom teachers and parents. In the future study and life, teachers and parents will observe the development trend of students, due to the different changes in different stages of multiple tests. According to students' learning interest, test situation, parents and teachers observation and other aspects to guide students' course selection and future career direction planning.

6.3 Combination of characteristic courses and practice

(1) Club courses: Different club courses are set according to the characteristics of interest, so that students can re-examine each subjects in the situation of physical and mental relaxation and reduce weariness.

(2) Way Dream course: Video link with celebrities and excellent practitioners in various industries, so that students can understand the specific situation of each career, and guide students in their study and career planning.

(3) Social practice: through business competitions, volunteers, visits and other ways to deepen into the specific work of all walks of life.

7. The enlightenment of comparing high school education in Sweden and China

(1) Give the initiative of project learning and course learning to students, and strengthen the cultivation of students' comprehensive quality. Encourage students to explore independently, research, practice independently, encourage students to summarize, and give certain rewards. Sweden will project learning do very deep, students in the process of the whole project to establish research objectives and subject, research and research, form a group discussion, finally form written paper, the focus of practice and enlightenment through the form of paper record, so as to study themselves and other students in the future. The whole process is student-led. Our current social practice does not operate into one.

The project worth in-depth study is only a simple understanding of various industries in their spare time in summer and summer vacation. Usually, the social practice of our school will focus on one or two days, and the students are divided into different groups for research to form a simple investigation report. More time and planning should be given for practical activities, so that such activities have not only breadth but also depth.

(2) Deepen the curriculum reform, and actively study how to increase students' independent choice in subject setting. High school students in Sweden can freely choose courses according to their future plans, and then reach the way they want to go to college or employment by completing the credits. At present, China has also carried out the reform of high school education, increasing the flexibility of teaching materials, increasing the topic setting and practicality, and using theoretical knowledge to solve some practical problems. The way of choosing subjects allows students to freely choose the subjects that they like and are good at. After all, interest is the best teacher. In terms of students' choice, we should be more flexible to meet students' learning requirements. For example, the class is currently the teacher teaching students to listen to the class, whether students and teachers can alternately lecture, so that each student experience how the process of teaching and learning promotes each other, so as to stimulate students' interest in learning.

(3) Increase the characteristic courses to broaden knowledge to enrich high school education, avoid dead reading, reading dead books. Sweden's extracurricular life is rich and colorful, in addition to theoretical knowledge, high school set of practice time can account for half. At present, we can't do it, but we can gradually increase the practice time. For science and engineering to increase the proportion of experiments, only by hands-on operation can we remember the experiment process and conclusion more accurately. In addition to the book knowledge, some interest and hobby courses should be added. Our school uses club activity classes to enrich this content. Social activities can be added in the future. At present, there are 35 clubs, which are divided into groups education, art, discipline, science and technology, the future can also increase the cultural exchange, social research and so on.

(4) Increase the construction of functional classrooms, so that students can increase their hands-on ability. Swedish high school laboratory, equipment room is very perfect, countries and schools in this investment is also very big, we currently attach importance to the experimental equipment of schools and regions is not much, the future should increase this kind of capital investment, let the students really move up, not like now, by the brain, the teacher to give a specific conclusion.

(5) Ordinary high schools and secondary vocational schools should learn from each other to improve students' comprehensive ability. High schools in Sweden are comprehensive, and students can gradually find their own place in the learning process, and they can re-choose and correct them at any time. And we are currently ordinary high schools and secondary vocational schools are independent and separate, do not understand each other. Study good children on the ordinary high school, poor students to go to secondary vocational colleges, such cognition is wrong. We should increase the cooperation between ordinary high schools and secondary vocational schools and universities so that students know each other. At present, the country has also launched the "general vocational integration" education mode, in the high school entrance examination of the students can choose "General integration" takes classes together with ordinary high school students and learns high school cultural courses. If you pass the high school academic proficiency examination, you can take the college entrance examination as a high school student and obtain the ordinary high school diploma. If the exam did not pass, you can choose to learn technology, the draft of higher vocational colleges, only for technology.

8. Conclusion

China's high school education reform has been in the stage of continuous exploration. At present, the new reform of the college entrance examination is still short, and there are still many problems to be solved. We still have a long way to go. High school education, as an important part of the

whole education system in China, its reform is of great significance. It is related to the change of the direction of talent training in China, and also plays a vital role in the division of talent level and the division of labor of social structure in the future.

High school education reform is a problem that students, parents, teachers, schools and other aspects need to face together. At this stage, choosing a suitable development path for students is responsible to students and their families, as well as to the whole society and the country. High school as a watershed should contribute to the national talent selection.

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