

Study on the Problems and Countermeasures of High School Students' Subject Selection under the New College Entrance Examination Reform in Hubei Province

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Abstract: In 2014, China implemented a comprehensive reform of the college entrance examination. Since then, Hubei Province has implemented the "New College Entrance Examination", which adopts the "3+1+2" subject selection program, students independently choose subjects on the basis of language, mathematics and foreign languages. Students are required to choose one subject from History and Physics, and then two subjects from Ideology and Politics, Geography, Chemistry and Biology to form their own examination subjects. This new teaching mode breaks through the shortcomings of the traditional division of arts and sciences, which cannot fully respect students' individual differences and independent choices, and allows students to choose suitable subjects according to their own interests and needs, so as to achieve the goal of comprehensive and individual development. Since the implementation of the new college entrance examination reform program, the new round of college entrance examination reform has attracted extensive attention from experts and scholars about the new college entrance examination reform. These researches are mainly concentrated in Zhejiang and Shanghai, and most of them are researches on students' curriculum and curriculum reform. By combing the relevant literature, this paper finds that the current situation of curriculum selection in China's general high schools is not optimistic, and there are many problems that need to be discovered and solved by us. In addition, there are fewer studies on the "3+1+2" college entrance examination reform program in Hubei Province. In view of the different curricula in different provinces, we must study the curriculum of general high schools in Hubei Province in depth and analyze the problems, so as to put forward corresponding countermeasures for the curriculum of general high schools in Hubei Province.

Keywords: New College Entrance Examination; High School Students; Subject Selection; Problems and Countermeasures.

1. Introduction

Since September 2014, the State Council issued the Implementing Opinions on Deepening the Reform of the Examination and Enrollment System, a new round of college entrance examination reform has officially begun. Different from Shanghai's "6 choose 3" and Zhejiang Province's "7 choose 3" program, Hubei Province, as the third batch of pilot units of the new college entrance examination reform, has changed the traditional college entrance examination mode to "3+1+2". The "3+1+2" subject selection program, which means that on top of language and mathematics, students will first choose one subject from physics and history, and then two subjects from the four subjects of politics, geography, chemistry, and biology. This reduces the combination of subjects to 12 types, which not only empowers students to make their own choices, but also facilitates the smooth implementation of the new college entrance examination reform in Hubei Province. Students' independent choice of subjects makes up for the limitations of traditional arts and sciences to a certain extent, and is conducive to the development of individual differences among students. However, the new college entrance examination reform program is also accompanied by new challenges. Therefore, it is of great practical significance to study the problems of subject selection of high school students in the new college entrance examination and to find and implement effective countermeasures and suggestions.

2. Analysis of Survey Results

2.1. Basic Situation

2.1.1. Gender Structure

A total of 260 questionnaires were distributed, 256 questionnaires were recovered, of which 255 were valid questionnaires, with an effective rate of 98.1%. Among the 255 survey respondents, there are 108 male students, accounting for 42.35% of the total; there are 147 female students, accounting for 57.65% of the total. The ratio of males and females in this survey is roughly equal.

2.1.2. School Level Structure

In this survey, 17.6% of the students were from provincial key high schools, 27.06% were from municipal key high schools, and the remaining 55.29% were from township high schools.

2.1.3. Structure of Parents' Education Level

Among the respondents, among them, the largest proportion of parents' education is in junior high school and senior high school, both of which are 32.94%; among the respondents, the smallest proportion of parents' education level is elementary school and below, which is 8.24%; the proportion of parents' education level is college and bachelor's degree and above is 11.76% and 14.12%, respectively.

2.2. Current Situation of Senior Secondary Students' Subject Choice

2.2.1. High School Students' Basic Intention to Choose Subjects

In order to understand students' subject choice intention, the questionnaire set these two questions: "What is the subject you are most interested in among history and physics? and the two subjects you are most interested in among politics, geography, chemistry and biology?" The answers of the students to the first question showed that 65.88% of the students were more interested in history and only 34.12% were interested in physics in the choice between history and physics. The largest number of students tended to choose Politics and Geography with 42.35%, followed by Chemistry and Biology with 23.53%. A total of 65.88% of the total number of students preferred these two combinations. This shows that students still prefer to choose the subjects of "big literature and big science", which is basically the same as Liu Baojian's conclusion.

2.2.2. Actual Choice of Subjects by Senior Secondary School Students

The results show that 52.94% eventually chose History while 47.06% of the students chose Physics. The number of students who chose History was 12.94% less than the number of students who were interested in the subject. This indicates that some students may have been influenced by other factors and did not choose History as their most interesting subject. On the other hand, the number of choices for Physics has increased by 12.94% compared to the number of interested students, which shows that there are many factors affecting students' choice of subjects, and interest is only one of them. The results show that students' actual choices of two subjects among Politics, Geography, Chemistry and Biology are basically the same as the intended choices, but 38.83% of students chose Arts and Science crossover subjects. This shows that under the background of the new college entrance examination reform, although "big literature and big science" is still the mainstream, students' choices have been further expanded.

2.2.3. Factors Affecting Students' Subject Choice

The results showed that when making subject choices, the factors that students considered most important were subject strengths (93, 36.47%), subject interest (63, 24.70%), developmental needs (42, 16.47%), future employment (30, 11.76%) and degree of difficulty (27, 10.58%). The factors that students found least influential in choosing their subjects were level of difficulty (87, 34.11%), future employment (69, 27.06%), developmental needs (51, 20%), subject interest (27, 10.58%), and subject strengths (21, 8.23%). It is clear from this that students are most concerned with strengths in the discipline and least concerned with the difficulty of study.

When choosing majors, students pay more attention to hobbies, developmental needs and professional abilities, and less attention to difficulty. This is in line with the original intention of Hubei Province's "3+1+2" new college entrance examination reform program, and the distribution of students' subject selection factors is more scientific and reasonable on the whole.

2.2.4. Students' Knowledge and Perception of the New College Entrance Examination Reform

In the questionnaire, in order to investigate students' understanding of the new college entrance examination reform and the channels through which they learned about it,

the questionnaire set up the following two questions: "Did you know a little bit about the subject selection mode and policy before subject selection?" and "Through which channels did you learn about the subject choice model and policy?". The results showed that: 63 students were very well informed; 111 students were somewhat informed; 63 students were generally informed; 18 students were not very well informed; and 0 students were unfamiliar with the subject choice model and policy of the new college entrance examination reform. 57% of the students learned about the new college entrance examination reform model from school publicity, 26% of them got the information from the news media, and only 14% of them learned about the subject choice model and policy through which channels. information, and only 14% of the students got the information from official documents. This shows that school publicity is the main channel of publicity, and that students have a single channel of knowledge about the subject selection scheme. The results of the survey on the new college entrance examination assignment program and the degree of satisfaction show that 42.35% of the students think that the new college entrance examination reform program is very reasonable, 55.29% of the students think that it is basically reasonable, and the remaining 2.36% of the students think that it is unreasonable. Moreover, 94.12% of the students were satisfied with the new college entrance examination reform, and only 5.88% of the students were dissatisfied with the new college entrance examination reform program. This shows that although the new college entrance examination reform gives students more choices, expands their range of choices and promotes the development of personal interests. However, there are still some problems in its implementation.

3. Analysis of the Causes of Subject Selection Problems of High School Students under the New College Entrance Examination Reform in Hubei Province

3.1. Students' Lack of Awareness and Planning

3.1.1. Students' Lack of Self-knowledge

Students' knowledge and understanding of self is a prerequisite for students to make subject choices. Subject selection in the new college entrance examination requires students to plan for their own studies, study directions and future career development, so that they can choose their majors according to their own plans. However, most students in China have long had a lack of self-understanding, which has been further exposed after the implementation of independent subject choice in the new college entrance examination. Through interviews, it is understood that many high school students are not very satisfied with the subjects they choose for the college entrance examination, mainly because they lack knowledge of themselves and do not make scientific judgments. In addition, the lack of sufficient knowledge about themselves can confuse students in their studies, thus affecting their interest in learning. In the interviews, teachers jointly mentioned, "In the guidance of subject selection for the new college entrance examination, the most headache is that students are uncertain about their interests and future, do not know themselves well enough, lack self-knowledge, and that they only talk about knowledge in class, and lack guidance for students to correctly

understand themselves." Many high school students also said, "Not knowing our own preferences and how to choose our own subjects for the college entrance exams, and teachers not having the time to guide us, it is difficult to make a scientific decision on our own."

3.1.2. Lack of Students' Knowledge on Subject Selection

Having information about the subjects chosen for the new college entrance examination is a prerequisite for candidates to make scientific subject choices. The curriculum content of different subjects varies. Before making subject choices, students should at least have a comprehensive understanding of the curriculum structure, curriculum objectives, curriculum content, etc., in order to better determine their elective subjects, thus reducing the possibility of changing the subjects in the future. Different subjects require different abilities from students. For example, Physics requires a high level of mathematical and logical intelligence; geographical knowledge requires a higher level of visual-spatial intelligence from students, and students can choose the right combination of subjects according to the strengths of their own abilities so as to make better use of their strengths. At the same time, when making subject choices, they should also acquire certain professional knowledge, which can make students have a keen interest in their career development and help them choose their examination subjects in a scientific and reasonable manner.

3.1.3. Lack of Career Planning by Students

When students make subject choices, they must make reasonable plans for their own studies as well as their future career development, so as to realize their own scientific and autonomous decision-making. The survey found that students in three high schools in Hubei Province generally lacked career planning in the process of subject selection, which was mainly manifested in the following points. Secondly, the lack of students' understanding of themselves and their lack of understanding of the subject choices of the new senior secondary school entrance exams made candidates lose their way in the learning process, thus frustrating students' enthusiasm for learning. Guiding students in career planning is an inevitable requirement of the new college entrance examination reform. First of all, in a student's life, career planning is carried out throughout, and the learning effect of a student with a plan and a student without a plan is very different. Secondly, as schools and teachers, career planning is an effective way to guide students to make subject choices on their own, which can help them plan their studies and their lives so that they can make decisions comfortably when choosing their own examination subjects. Career planning plays an important role in the whole process of students' independent learning. College students' lack of planning in their subject choices, their lack of clarity in their own perceptions, and their lack of understanding of the new college entrance exams are concrete manifestations of the insufficient attention paid to career planning education. When being interviewed, many high school students in the three high schools said that they were confused and did not have a direction in life or a life plan of their own. One high school student remarked, "I'm still struggling with which course to take, not that I don't want to take it, but I don't know which course to take, and I have no plans for my future at all."

3.2. Teachers' Lack of Subject Choice Guidance for Students

In the survey, the three high schools in Hubei Province did not develop a complete and specific set of guidelines for course selection. In the interviews, teachers in the three high schools admitted that the schools did have some problems in guiding students in subject selection. A scientific and reasonable guidance system is a prerequisite for teachers to guide students effectively. How to make subject choices correctly is the key to ensure the reform of the new college entrance examination. An effective subject selection guide can not only guide students to treat independent subject selection correctly and maintain a good mindset, but also enable students to make scientific independent choices in selecting subjects, thus avoiding confusion and helplessness in subject selection. In addition, due to the inadequacy of the guidance system for subject selection, teachers do not play a better role in guiding students in the process of subject selection. The three high schools in Hubei Province have not formulated a clear guidance system for students' subject selection, but rather conduct irregular talks and training for teachers and students, and have not established a corresponding assessment and evaluation system for teachers' guidance, which has caused teachers to be too casual in guiding students' subject selection, and lack of scientific and effective guidance for students' subject selection.

3.3. Schools do not Offer Complete Combinations of Subject Choices

After the "3+1+2" reform, Hubei's college entrance examination reform has made a qualitative leap, with a total of 12 combinations available for candidates to choose from, but not all 12 combinations are offered. Through interviews, we learned that most schools did not offer all combination types, first, because some combinations of subject choices were not favored by students, and in order to reduce the pressure on schools and teachers, schools had to cut the combinations with fewer choices. The second is that nowadays, subject choices in the HKALE are aligned with the requirements of majors in colleges and universities, and students who have chosen some of the combinations may be very restricted in the choices of majors they can choose when they enter universities. Taking these two factors into consideration, senior secondary schools have then removed these combinations of subject choices in order to safeguard the future development of students. As a result, when some students are unable to choose their preferred combinations of subject choices, they will turn to other combinations, so that they may be lost and confused in the course of their studies.

3.4. Parental Influence on Students' Subject Choice

The questionnaire survey shows that 74.12% of parents give guidance to students before subject selection, and in the question of the greatest influence on students' subject selection, 25.88% of students think that their parents' influence plays the most important role when choosing a subject, which is the influence factor that accounts for the largest proportion of the students other than themselves. From the perspective of caring for their children's growth, parents will combine their own work experience, life experience, and social cognition in students' subject choices, and tell students that they should study a certain direction, which will have

good employment prospects in the future, and so on, and this influences the results of students' subject choices to a great extent. This suggests that parents' opinions influence students' choices to a great extent. However, it was found through the visits that most parents did not know much about how to guide their children's subject choices and lacked information about the policies related to the new college entrance examination reform. Parents believe that the new college entrance examination reform can increase students' choices, however, regardless of the changes in the new college entrance examination policy, concerns and worries about students' performance in the new college entrance examination seem to be unabated. The choice of subjects for senior secondary students is based on their interests to the greatest extent possible. Parents are concerned that students are only focusing on their own interests without comprehensively considering their own strengths in the subjects and the degree of difficulty of the subjects, and they are worried that inappropriate choices of subjects will affect their performance in the college entrance examination. Therefore, without a comprehensive understanding of the new college entrance examination reform policy and students, some parents' guidance on students' subject choices is one-sided.

4. Countermeasure Suggestions for Subject Selection of High School Students in the Context of the New College Entrance Examination in Hubei Province

4.1. Students Correctly Recognize Themselves and Make Subject Choices Prudently and Reasonably

Correct understanding of self is the prerequisite for students to make subject choices independently. Students should know what kind of person they are, what kind of person they want to be, and their interests, strengths and weaknesses. Only when they know themselves correctly and understand themselves can they choose the most suitable subject combinations for themselves according to their own characteristics and ability advantages. First of all, students need to carry out self-assessment, including understanding their interests, strengths, weaknesses, values, career plans, etc. This can be done by completing self-assessment questionnaires, talking to teachers or counselors, and participating in career exploration activities. Before choosing a subject, students also need to fully understand the characteristics of each subject, the content of study, the difficulty of study, and the prospects for future development. This can be achieved by consulting relevant books, consulting teachers or older students, and attending subject lectures. It is also important to set clear learning goals and career plans so that you can have a basis for choosing your subjects. Goals should be measurable, achievable and challenging. In making their choices, students can consult teachers, counselors, parents, classmates, etc. for advice and suggestions. However, it is important to note that the final decision should be their own responsibility and not rely solely on the advice of others. Students should understand the importance of decision-making. Scientific and reasonable decisions on subject choices can help students make fewer detours in their future studies, not to mention that they will not regret their choices

and have to choose again. Learning to be responsible for their own lives and the consequences of their own decisions, learning to plan their own careers, weighing various factors, collecting information that helps them make scientific and reasonable choices, and making choices on their own. They should make full use of a variety of resources such as family, school, and the Internet, exploring the society and obtaining information, so as to enable students to make scientific and independent choices. After choosing subjects, they may find that certain subjects are not suitable for them. At this point, students should have the courage to make trial and error and adjustments, and replace unsuitable subjects in time to avoid wasting time and energy. No matter which subjects they choose, students need to maintain an attitude of continuous learning and self-improvement. Through continuous learning and practice, students can know themselves better and explore their potentials and strengths. In conclusion, students' correct understanding of themselves and making careful and rational subject choices require self-assessment, understanding of the characteristics of the subject, setting of goals, consulting others, trial and error and adjustment, as well as continuous learning and self-improvement. These steps will help students make more informed choices and lay a solid foundation for their future studies and career development.

4.2. Teachers Strengthen Professional Training and Guide Students to Make Rational Subject Choices

School teachers play a pivotal role in the subject selection of senior secondary school students. However, due to the fact that most teachers have not renewed their educational concepts, have not received professional training, and have belittled the importance of students' subject choices, most of them only play the role of bystanders in subject choices, or decide for students directly, without playing their proper guiding role. In order for teachers to play a better guiding role in subject selection, it is necessary to establish the concept of career development through intensive professional training, so that they can correctly recognize the significant impact of subject selection of the new college entrance examination on students' development. In addition, schools should have specialized teachers in charge of career education, and career education teachers train all teachers on the interpretation of the new college entrance examination program in Hubei Province, theories of career development, university selection, college entrance examination volunteering and other aspects. Through professional training, teachers will have a deeper understanding of their own career concepts and career development, and a deeper understanding of the reform of the college entrance examination, college enrollment policies, college major settings, volunteer application, and general career categories. They will have a correct understanding of students' stages of development, a correct understanding of the relationship between their future studies, majors and careers, and will guide students to know themselves correctly, to explore society, to find their future directions, to plan their lives, and to guide them to make subject choices in a scientific way.

4.3. The Education Sector Should Strengthen Organizational Leadership and Provide Safeguards for Subject Choice

The education department should support schools to carry

out subject choice guidance for senior secondary school students and provide the necessary safeguards for the smooth implementation of their work. First of all, the Ministry of Education should formulate relevant policies to clarify the guiding principles, standards and procedures of subject selection and to ensure the scientific and fair nature of subject selection. In addition to the policy guarantee, the Ministry of Education can should special consulting and guiding institutions to provide students with consulting and guiding services for subject selection, and help students understand the characteristics of different subjects, future development prospects and suitable subject combinations for themselves. At present, most secondary schools in China have not yet set up "subject choice" guidance centers, nor do they have a set of systematic subject choice guidelines. This requires the relevant education departments to formulate a specific plan, increase human, material and financial resources, and assist schools in setting up a professional subject selection guidance team and a comprehensive guidance center. The opening of subject choice guidance centers requires the strengthening of the training of guidance teachers, which is difficult to be achieved by schools alone. Therefore, it is all the more necessary to strengthen the training of teachers, improve their knowledge and understanding of subject choice, and ensure that they are able to provide students with scientific and reasonable advice on subject choice. In addition, the Ministry of Education should improve the examination and evaluation system and strengthen the construction of information technology, so as to ensure the fairness and scientificity of subject selection, and provide functions such as on-line inquiry and simulation of subject selection, so as to make it convenient for students and their parents to understand the relevant information of subject selection. Consideration can also be given to incorporating the overall quality and interests and specialties of students into the assessment system, so as to reflect students' abilities and potentials more comprehensively. Only the relevant education departments are capable of gaining a comprehensive understanding of the subject choices of senior secondary school students in their respective regions, and advising secondary schools on subject choice guidance based on the overall situation. In addition, the education authorities should select and employ specialists from colleges and universities, scientific research institutes and vocational education institutions to organize training for teachers of subject choice guidance in secondary schools, and to join forces with the community and schools to ensure that students are given clear and accurate subject choice guidance.

4.4. Parents Actively Understand the New College Entrance Examination Reform and Enhance Effective Participation

The new round of reform of the college entrance examination makes up for the limitation of arts and science subjects by independent selection of subjects, so that students can give full play to their autonomy and better utilize their strengths. First of all, parents should take the initiative to pay attention to the relevant policy documents, reform programs and implementation details released by education departments and schools. They can also obtain more information and interpretations about the new college entrance examination reform through the Internet and education forums. Secondly, parents need to understand the specific content, change points and possible impact of the new college entrance examination reform. For example, they

should understand the changes in examination subjects, distribution of marks and admission methods so as to better guide their children to cope with the reform. In addition, parents should communicate fully with their children, understand their children's interests, specialties and future career plans, and help them develop reasonable study plans and goals. At the same time, they should also pay attention to their children's psychological changes and give them the necessary support and encouragement. It is also important to pay attention to school dynamics. Parents should actively participate in school activities, keep in touch with teachers and classmates, and learn about the school's specific practices and measures in the new college entrance examination reform. This will help parents better understand their children's learning in school and provide more help and support to their children. Again, parents need to update their education concepts and methods and improve their education quality. They can continue to improve their education level and ability by attending parent schools, reading education books and communicating with other parents. Finally, on the basis of understanding the new college entrance examination reform, parents can actively participate in the decision-making process of the school and the community and put forward their own opinions and suggestions for the reform. This will help promote the reform in a more scientific and rational way, and also create a better educational environment for their children. In conclusion, parents' active understanding of the NSS reform and enhancement of their effective participation require various efforts such as proactively obtaining information, learning relevant knowledge, communicating with their children, paying attention to school dynamics, improving their own quality and actively participating in the decision-making process. Through these measures, parents can better support their children to cope with the challenges and opportunities brought by the new college entrance examination reform.

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