

# Factors Affecting the Development of Education in China

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**Abstract.** The development of China's education today is a remarkable achievement, but some researchers found that there are still many factors affecting the development of China's education. In view of this situation, this paper collects some data like PISA 2018, official data of the Ministry of Education, and official survey data of the government and analyzes them, and then comes to factors affecting education in China. This study found that gender, areas, views and values affect the development of education in China. There are differences between boys and girls in their performance and future planning. The difference in economic conditions between urban and rural areas has led to different levels of education. Different people's cognitive bias towards general education and vocational education has affected the overall development of Chinese education. Finally, some suggestions on improving the law, increasing investment and expanding publicity are put forward, which is conducive to solving some existing problems.

**Keywords:** Education; China; gender; areas; views and values.

## 1. Introduction

Since 1949, the changes in China have been obvious to everyone in the world. Politically, China has gradually stepped onto the world stage and become one of the world's major powers. China has more voice in diplomacy and no longer needs to be afraid of confrontation between powerful countries. In internal affairs, China adheres to the socialist system with Chinese characteristics and has a strict system of laws and regulations. This system has provided a strong impetus for China's economic development and social progress. Economically, China has become the world's second-largest economy. China was a big agricultural country at the beginning, and now has made remarkable achievements in all walks of life. China advocates digital economy. China's digital rural construction is an inevitable measure of rural revitalization in the new era [1]. In 2020, China built a well-off society in an all-around way and made the people live a good life. The construction of high-speed rail, the emergence of the sharing economy, and the achievement of keeping the economy stable during the epidemic all show China's progress. In terms of culture, the emergence of various scientific and technological achievements and literary achievements has demonstrated China's strong strength. China's education has made great progress. Many universities, including Tsinghua University and Peking University, are famous around the world.

Once the "13th Five-Year Plan" comes to an end in 2020, all planning goals have been achieved, providing the groundwork for promoting educational modernisation and achieving high-quality educational development [2]. The coverage percentage for inclusive kindergartens was 84.7%, and the gross enrollment rate for preschool education was 85.2% [2]. The nine-year compulsory education consolidation rate was 95.2% [2]. The gross enrollment rate in high school climbed to 91.2%, and it increased even more in higher education to 54.4% [2].

Although China's education has undergone qualitative changes compared with the past, there are many inequalities in China's education development due to various reasons such as its large population. What will affect the development of education in China? This is a problem worthy of discussion and research, which needs to be paid attention to.

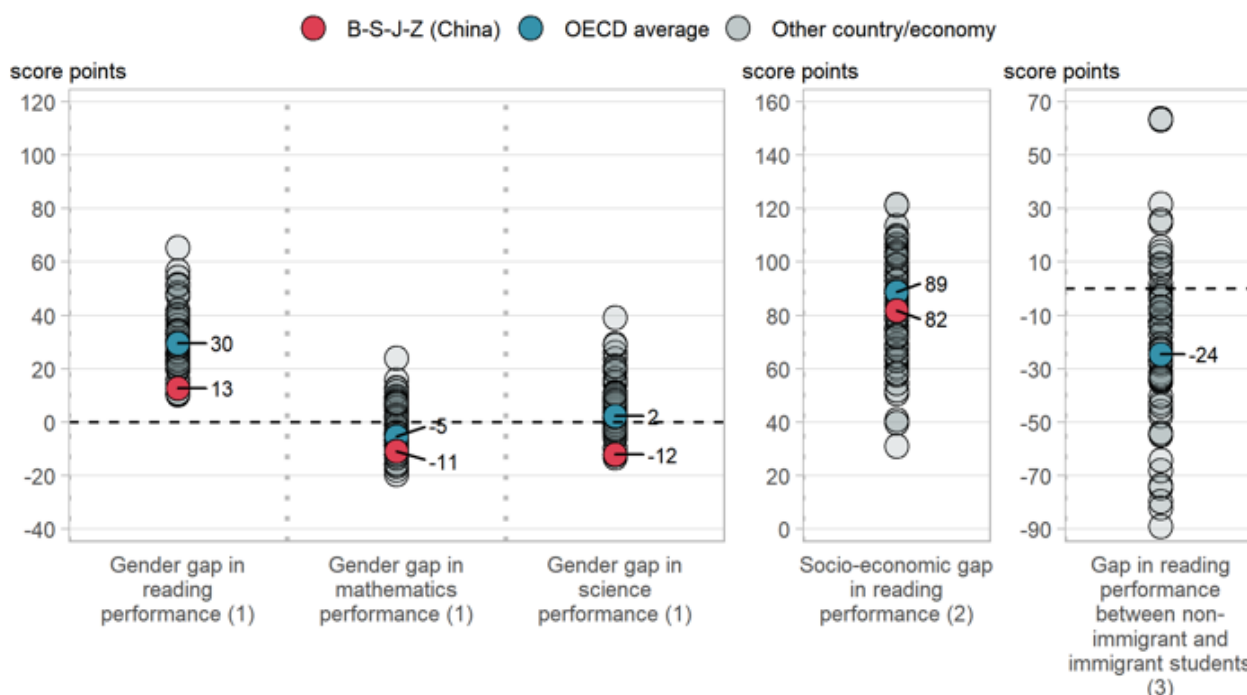
This study is based on PISA 2018, official data from the Ministry of Education, official survey data of the government, etc. to analyze the factors affecting China's education, which tries to test the problems of the education industry and people's concerns with objective data and draw conclusions. This study first introduces the background of China and extends to education. Next, it analyzes three factors that affect Chinese education: gender, areas, views and values. These three parts start with

official data, and then analyze and summarize in combination with China's current laws and policies. Finally, in view of the problems caused by the three factors mentioned above, some suggestions and conclusions are put forward.

## 2. The First Factor Affecting China's Education Development: Gender

With the further development of scientific research, there are more and more studies on gender differences. From the origin of human beings to the present, people have more and more diversified definitions of gender. The emergence of gender categories such as asexual and transsexual has increased people's inclusiveness. But on the whole, the research on men and women still accounts for the majority. Therefore, the research on the impact of gender on the development of education in China is mainly based on the academic achievements of boys and girls.

PISA is an international test project, mainly including reading, mathematics, science, etc. Chinese students participating in the test came from Beijing, Shanghai, Jiangsu, Zhejiang, Hong Kong, etc. This research selects data from 2018. In B-S-J-Z (China), 12,058 students took the exam in total, and they come from 362 different schools, representing 992,302 15-year-old students (81% of the total population of 15-year-olds). Referring to Figure 1, in B-S-J-Z (China), boys are 11 score points higher than girls in mathematics. In science, boys are 12 score points higher than girls. But girls are 13 score points higher than boys in reading. On average across OECD countries, although girls perform better than boys in science by 2 score points, the trend in most countries shows that girls are intelligent in reading. Boys are excellent in mathematics and science.



Notes: Only countries and economies with available data are shown. (1) Girls' minus boys' performance.

**Fig 1.** Differences in performance related to personal characteristics [3, 4].

Theoretically, although the sample size cannot replace the whole population, it is enough to explain some problems as a large international assessment recognized by the world. The research shows that boys and girls have different strengths in learning. Even though some boys or girls may develop in an all-round way, the overall trend does reflect the problem. Boys and girls have different physiological structures, so of course, their brains will also have different ways of thinking. A study by Haomin Zhang, Xi Cheng and Liuran Cui shows that girls have some advantages in reading and arts-related subjects [5, 6]. In contrast, in high school, boys have greater development potential in science, technology, engineering and mathematics (STEM) related subjects [5].

The differences in students' performance caused by gender differences have prompted China to constantly improve laws and policies related to gender and education. To reduce the educational inequality caused by gender discrimination in society, China has made great efforts to promote gender equality and educational equality.

All of these efforts are to ensure the equality of the right of men and women to receive education, so that China's education can develop to the current level. If there is no state to protect the legitimate rights and interests of citizens, the development of education in our country will inevitably face many obstacles due to the deviation of people's traditional understanding of gender and the impact of gender differences on academic performance.

### 3. The Second Factor Affecting China's Education Development: Areas

Since 1949, China has begun the process of urbanization. At the beginning, rural areas accounted for a large proportion of China. Later, the proportion of cities began to increase gradually. Despite some obstacles in the process, China's urbanization process has been slow or even stagnant. But luckily, China saved it in time. The reform and opening up and the implementation of a series of urbanization measures have greatly increased the proportion of cities in China.

Now, with the realization of a well-off society in an all-around way, the gap between the rich and the poor in rural and urban areas has gradually decreased. However, it cannot achieve complete equality. There are still gaps in resource allocation, financial investment and infrastructure construction between rural areas and cities. Therefore, this study compares various indicators in rural areas and urban areas to study the impact of the areas on China's education development.

**Table 1.** Number of Students in Regular Senior Secondary Schools in China [7].

(Unit: person)			
	Graduates	Entrants	Enrolment
Total	7802267	9049538	26050291
Urban Area	3913355	4473720	12971909
Counties and Towns Area	3641072	4201130	12089640
Rural Area	247840	374688	988742

**Table 2.** Number of Educational Personnel in General Secondary Schools in China [8].

(Unit: person)							
	Educational Personnel	Full-time Teachers	Adm. Personnel	Supporting Staff	Workers	Others	Part-time Teachers
Total	7805536	6915862	187538	289592	384168	28376	32463
Urban Area	3486512	3046582	99243	146505	182121	12061	16198
Counties and Towns Area	3467887	3112302	67093	115267	160120	13105	12790
Rural Area	851137	756978	21202	27820	41927	3210	3475

**Table 3.** Condition of Fixed Assets and Teaching Resources in Regular Senior Secondary Schools in China [9].

	Areas Occupied (m <sup>2</sup> )	Campus Football	Books and Magazines in Libraries (Volume)	Number of Digital Terminals (Set)	Classroom (Room)	Total Value of Fixed Asset (10,000 yuan)
Total	1166411742.00	15696	1076882581	6924551	1213731	125051470.28
Urban Area	584054872.48	8652	593487017	4090579	657705	72041429.43
Counties and Towns Area	513001084.41	6215	441369091	2553484	496821	46354767.75
Rural Area	69355785.11	829	42026473	280488	59205	6655273.09

**Table 4.** Other school running conditions in Regular Senior Secondary Schools in China [10].

(Unit: school)

	Schools No: Sports Areas Reached Standard	Schools No: Sports Equip. Reached Standard	Schools No: Musical Instru. Reached Standard	Schools No: Fine Arts Instru. Reached Standard	Schools No: Equip. of Natural Sci. Reached Standard	Campus Hospital	Number offull-Time Medical Schools	Number of Schools With Allied Health Staff
Total	13661	14001	13883	13914	13944	12505	9531	5956
Urban Area	7143	7400	7350	7375	7380	6843	5454	3488
Counties and Towns Area	5750	5829	5771	5775	5801	5010	3612	2138
Rural Area	768	772	762	764	763	652	465	330

According to Table 1, the number of graduates and enrolment in high schools in urban areas is about 13-15 times that in rural areas. Referring to Table 2, the number of teachers and staff in cities is about 4-5 times that in rural areas. According to Table 3, the areas of urban high schools are around 8 times that of rural areas. The number of books and digital terminals in cities is about 14 times that in rural areas, and the number of classrooms and the total value of fixed assets in urban areas are about 10-11 times that in rural areas. As shown in Table 4, the number of high schools with all kinds of equipment equipped up to standard in cities is almost 9 times that in rural areas. The health resources of urban high schools are around 10-11 times that of rural areas.

In China, compulsory education only includes a primary school and junior high school. Students need to rely on their real talents to enter a good high school. Therefore, the survey of the number of high school students can also reflect the quality of students' performance. The above data analysis shows that both the number of students and the allocation of resources are more in urban areas than in rural areas. Where there are many educational resources and financial inputs, it is beneficial to improve students' performance and easy to develop education. In China, junior high school dropout rates are still a significant issue that requires attention [11]. Moreover, kids from low-income families in remote locations were unable to complete successful online learning at home during the COVID-19 outbreak [12]. Urbanization has widened the difference between urban and rural areas in terms of access to basic education, as demonstrated by Fangyu Ju, Shuqing Wang, and Wei Lin [13]. Urbanization has reduced the educational gap between urban and rural areas in economically developed areas [13].

There are also individual cases around someone, such as rural students who have achieved high achievements due to personal efforts, urban students who have achieved nothing due to personal laziness, and so on. Although personality will have an impact on performance, the overall trend remains unchanged.

Some significant challenges that need to be addressed include ensuring access to high-quality education and lowering educational inequality [14]. China has also implemented a number of laws and regulations in response to the imbalanced development of education brought on by the urban-rural divide. The right to receive scholarships, student loans, and grants in compliance with the pertinent State legislation is guaranteed under Article 43 of Chapter V of the People's Republic of China's Education Law. The governments are required to establish special funds for education under Article 57 of Chapter VII in order to give priority to assisting the implementation of compulsory education in remote and impoverished areas and ethnic minority communities. These laws and policies are vigorously promoting the development of education in China.

#### 4. The Third Factor Affecting China's Education Development: Views and Values

In the development of education, aspects of material and spiritual are equally significant. Even if the state provides sufficient material conditions, there is no way to carry out education without the support of people's subjective will. On the contrary, people have only the desire to receive an education, but they do not have enough material basis to develop an education. The areas factors mentioned above mainly focus on the material aspects, so this part concentrates on the impact of the spiritual aspects.

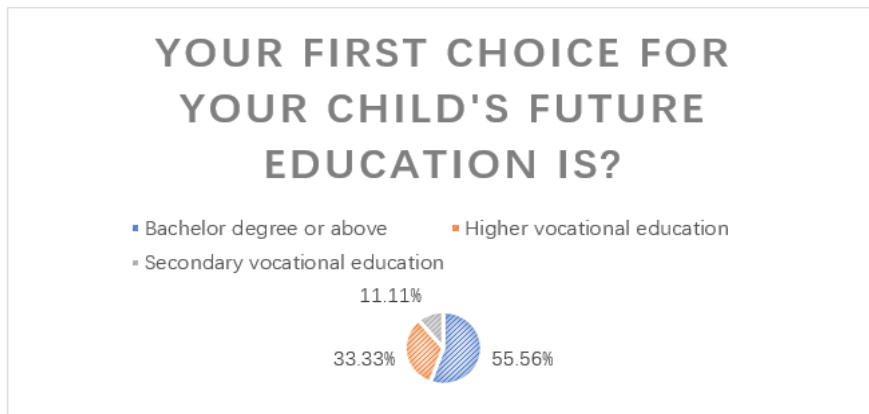


Fig 2. Q4 on the survey of Changzhou citizens' awareness of vocational education [15].

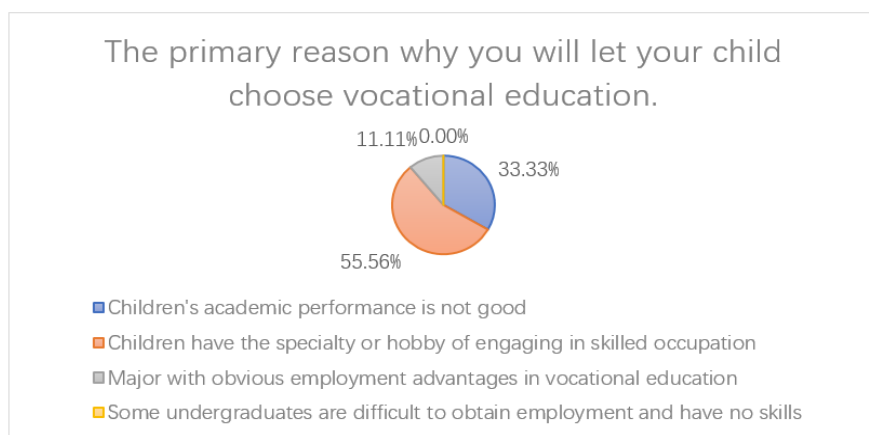


Fig 3. Q6 on the survey of Changzhou citizens' awareness of vocational education [15].

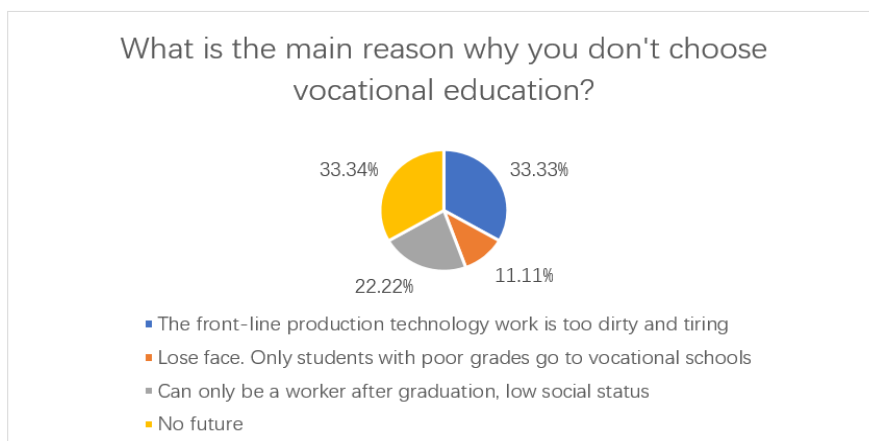
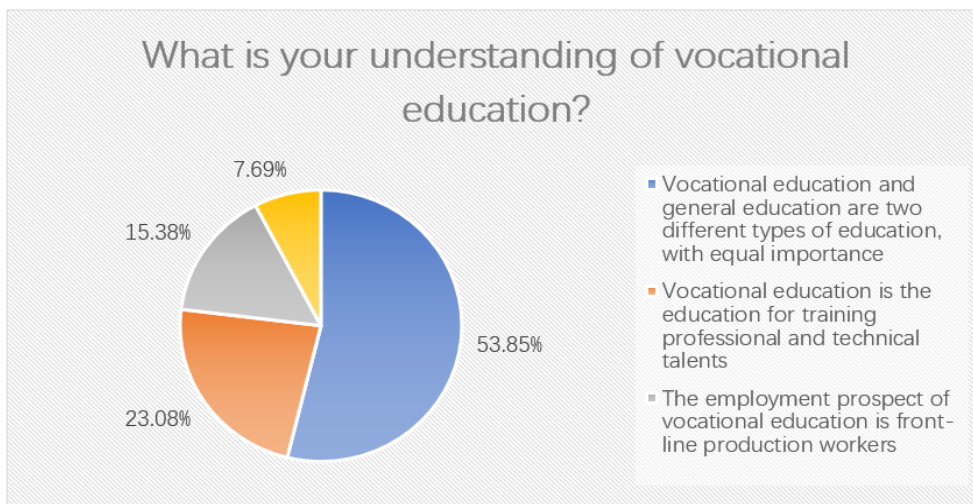


Fig 4. Q7 on the survey of Changzhou citizens' awareness of vocational education [15].



**Fig 5.** Q9 on the survey of Changzhou citizens' awareness of vocational education [15].

The survey data comes from the official government website of Changzhou, Jiangsu Province. The respondents are all citizens, so the survey is representative. According to Figure 2, more than half of parents will let their children receive at least undergraduate education, while the proportion of choosing vocational education is less than half. According to Figure 3, more than half of parents choose vocational education in consideration of their children's strengths, hobbies and employment prospects. Only a small proportion of parents are forced to choose vocational education because of their children's poor performance. Referring to Figure 4, the answers are mainly set for the objective factors of vocational education and the subjective factors of parents' psychology. More than 85% of parents do not choose vocational education because of the environment, future, status and other factors of it. About 11 percent of parents only care about subjective factors such as the face. According to Figure 5, more than 90% of parents can face up to the advantages of vocational education.

Although most citizens can correctly view vocational education, the number of citizens who take the initiative to receive vocational education is still small. And there are still a small number of citizens who have an incorrect understanding of vocational education. From a small point of view, as a whole, if there is prejudice in only one city, then the citizens of many cities in the country will have more prejudice. In traditional Chinese concepts, people pay more attention to theory than practice, and pay more attention to research than skills. These ideas will affect the overall development of Chinese education. For China, vocational education and general education should be equally important. Social development needs scholars who study hard and workers with special skills. This is the impact of views and values on the development of education, which may lead to an imbalance in education development.

China introduced the Law of the People's Republic of China on Vocational Education to address the aforementioned issues. For instance, in accordance with Chapter I's Article 12, the country takes action to enhance the social standing and treatment of technical and talented workers, promote honorable labor, useful skills, and develop excellent fashion trends. In accordance with Article 54 of Chapter VI, the State optimizes the structure of educational spending, ensures that investments in vocational education meet the needs of their development, and promotes the legal collection of funds through a variety of channels.

## 5. Suggestions

Firstly, China should continue to maintain and gradually improve its current laws and policies. The three factors affecting education analyzed in the previous article are all constrained by China's laws and policies, so China's education level has changed qualitatively since the early days of the

founding of the People's Republic of China. The perfection of laws and policies requires the makers to enter the people's group and truly feel what the people need. Governments should not make some laws and regulations that are taken for granted. And it needs everyone's joint efforts to improve China's laws and policies with the development of the times through continuous research and discussion.

Secondly, in view of the education gap caused by the urban-rural economic gap, China should increase preferential policies for backward rural areas while developing economically developed cities, such as increasing financial investment and improving the construction of facilities, so that students in backward areas can also enjoy high-quality learning resources. The financial investment in compulsory education can improve the health level of adolescents and benefit more vulnerable groups [16]. In addition, China should also strengthen its supervision. The increase in financial investment may increase the risk of corruption. In order for the people to receive benefits without discount, China must treat the government departments strictly. In addition, teachers' salaries should also be appropriately raised to increase their motivation. Burnout may have an impact on teachers' health as well as their support for and dedication to sustainable school growth in the twenty-first century [17].

Finally, in view of the deviation of people's educational ideas, the community should increase publicity efforts, such as holding thematic education lectures, posting banners, distributing leaflets, and conducting regular research, etc. The government assigns tasks to communities, and each community formulates different publicity programs according to its own cultural characteristics. The community should try to conform to the preferences of the people, and combine education with pleasure, so that people can better accept new ideas.

## 6. Conclusion

This study found that the development of China's education is affected by gender, areas, views and values factors through the comparison of various data. This can be explained by the following facts. First of all, China has a large population, and the two subjective factors of gender and ideology are most likely to have an impact. Everyone is an independent individual, and there are differences both physically and psychologically. Just as there are no two identical leaves in the world, there are no two identical people in the world. Even though the twins look the same, their personalities cannot be exactly the same. They will be more or less different, even the opposite. Boys and girls have different brain structures and different ways of thinking, which leads to different grades and different plans for the future. Everyone has different values, and they have different views on things. For example, if some people like to collect, they will pay special attention to the calligraphy and painting of famous artists. Some people are not interested in collecting, so these paintings and calligraphy are worthless to them. Education is the same. Some families regard education as a necessity for their children's future life planning, so learning knowledge is their biggest task. Some families have a family property that needs children to inherit, or some families have problems with food and clothing, so learning is not their focus. This is one of the reasons.

Secondly, China has a huge land area, and centralized management is difficult to ensure that every place can enjoy the same treatment. This leads to the difference in objective conditions between urban and rural areas. The urban population is large and highly mobile, with developed commerce and frequent economic circulation. The rural population is small and relatively fixed, with few industries and slow economic circulation. Therefore, compared with rural areas, resources tend to be more urban. Although China has formulated many policies to help the rapid revitalization of rural areas, compared with the speed of urban development, the situation in rural areas is not optimistic. There are still economically backward rural areas in the first-tier cities, let alone the rural areas in the third-and-fourth-tier small cities. The economic gap between urban and rural areas has affected the development of education in China to some extent.

This study objectively expounds on three factors that affect China's education and gives some feasible suggestions. This is conducive to helping the public understand the current situation of China's education and the possible development direction in the future. Finally, due to the limited data, this study cannot obtain the data of all cities in the country, and can only select several representative groups of data for analysis. The research results and conclusions are universal, but the existence of examples that do not conform to the conclusions cannot be ruled out. In future research, more data can be combined to analyze and try to reach more accurate conclusions.

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