

Comparative Analysis of China-US Education System: Analysis to General Situation and Typical Image

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Abstract. Chinese education and American education have completely different historical origins. Chinese education is for the selection of imperial examinations to ensure talent supply. Modern education in China is mainly aimed at improving the overall educational level of the public. The roots of American education are religious dissemination, freedom, and thinking. Both China and the United States have a high educational penetration rate, however, because of the influence of family education, the penetration rate of early childhood education in the United States is not as high as that in China. The educational structure of the two countries is very different. China has adopted the dual mechanism of diploma and degree as a threshold for students to enter the workplace. Relatively speaking, education in the United States is only a way for students to grow up, and students' parents, the government, and private educational institutions are involved in and influence the growing process of children. The Chinese government supports compulsory education and has established a college entrance examination system, while the American government spends relatively little on education. American education is more influenced by neoliberal ideas and is profit-oriented, which has greatly affected the quality and sustainability of American education.

Keywords: Chinese education; American education; purpose; structure.

1. Introduction

Education is the key to a country's ability to cultivate talent and improve literacy, and different education systems have always been the focus of attention. China and the United States have two very different education systems that have also received much attention.

The Chinese present education system is a product of many influential factors throughout history. The imperial examination system appeared in the Sui dynasty (581 CE) when the government started to choose bureaucrats by merit rather than by birth [1]. The system became dominant in the Song dynasty, and it was used for nearly a thousand years until it was abolished in 1905. Moving forward to the People's Republic of China (PRC), during the Chinese Civil War, the Chinese communist party made literacy campaigns their main focus, which led to the foundation for the present education system and ideology in China. Under their territory, they opened schools in rural areas for both adults and children, which historically was the first time in China that a peasant got an education opportunity [2]. The government placed the education system over central control and made improving population-wide literacy the main focus of the focus for the early education system [3]. Nowadays, according to "The Ministry of Education of the PRC 2022 Work Highlight", there are some of the main foci on education system from the PRC government official perspective [4]. The first is to cast the soul and educate people with Xi Jinping's thoughts on socialism with Chinese characteristics for a new era, and to ensure that the field of education always becomes a strong position for adhering to the Party's leadership [4]. The second is to accelerate the improvement of the education system that comprehensively cultivates morality, intelligence, physical fitness and labor, promoting the healthy growth and all-round development of students [4]. The third is continuously promoting greater and more equitable benefits for all people from the fruits of educational development [4]. The fourth is comprehensively enhancing the capacity of education services [4].

The US education system starts with the institutions in the New England area, specifically Massachusetts Bay. After the Puritans arrived in America, they immediately started to build educational institutions to educate people on the ability to read and understand the bible without

someone else's explanation, which is the main reason for Great Britain to build a colony in the first place, to practice their religion freely [5]. As John Adams said in "A Dissertation on the Canon and Feudal Law": "A native of America who cannot read and write is as rare an appearance as a Jacobite or a Roman Catholic, that is, as rare as a comet or an earthquake. It has been observed that people are all of lawyers, divines, politicians, and philosophers" [6]. With the impact of the Enlightenment movement, the British came to this new colony for the freedom to speak and think, to enable education became one of the main foci for the colonel establishment process. Till now, the US education system can be categorized into three forms: homeschooling, public institutions, and private institutions. Education is mandatory for all children in the state, according to the statistics till 2017 from the PSS (Private School Statistics at a Glance) report in the "NCES, Demographic": "There are 34,576 private schools in the United States, serving 5.7 million PK-12 students. Private schools account for 25 percent of the nation's schools and enroll 10 percent of all PK-12 students" [7]. According to the National Home Education Research Institute (NHERI): "There were about 3.1 million homeschool students in 2021-2022 in grades K-12 in the United States (roughly 6% of school-age children)" [8]. This leaves the remaining 84 percent of school-age students in public institutions. The focus for public education institutions remains the same today as I mentioned above, which is to make sure every single one of the US citizens is educated. For private education institutions, according to CEPT (The Council for American Private Education), the mission of private schools is to: "preserve and promote educational pluralism so that parents have a choice in the schooling of their children" [9]. For homeschooling, which has become a popularity growing choice for parent's, according to HSLDA (Home School Legal Defence Association), the mission for homeschooling is: "Every child is different and should have the freedom to learn in a safe, loving environment at their own pace" [10].

This paper will make a systematic comparative analysis of the Chinese and American education systems from multiple aspects such as history, penetration rate, and structure.

2. Comparison of Education Coverage between China and America

By comparing the difference in national education coverage rate at every state between the two nations, it can better understand the gap between the two education systems. According to the Ministry of Education of the People's Republic of China, by the statistics of 2020, "There are a total of 2.537 million schools of all levels and types nationwide... There are 289 million students enrolled in all levels and types of academic education nationwide... The total asset value of teaching and research instruments and equipment of schools at all levels nationwide amounted to 1,228.83 billion yuan... The gross enrollment rate of preschool education has reached 85.2%... The coverage rate of universal kindergartens reached 84.7%... The consolidation rate of nine-year compulsory education reached 95.2%... The gross enrollment rate of senior middle school education reached 91.2%... The gross enrollment rate of higher education has further increased to 54.4%" [11]. According to the National Center for Education Statistics, as of 2020, there are a total of 129069 schools nationwide, with 98577 being public and 30492 being private [12]. Specifically comparing and contrasting the public schools, according to the "Report on the condition of education 2023", there are a total of 49.4 million students enrolled in public elementary and secondary school, and there are 3.8 million part-time and full-time teachers in public schools [13]. As for 2021, the gross enrollment rate of preschool education in the United States is over 50%.

3. Education Structure Comparative Analysis

The education structures in the two countries are also relatively different. For China, according to the "Education Law of the People's Republic of China", China's education is divided into five levels: preschool education, basic education, higher education, adult education, and special education. Among them, basic education includes primary education, junior high education, and regular senior high education, and a nine-year compulsory education system is implemented. That is, the state

provides free, universal, equal, and comprehensive basic education to school-age children and adolescents over the age of six. Higher education includes junior college education, undergraduate education, and graduate education, and implements a system of combining academic education and degree education. In other words, the state grants corresponding academic certificates and degree certificates to graduates of higher education. Adult education, including vocational training, cultural education, and self-study examinations, implements the concept of lifelong education. Namely, the state provides various forms of education and training to adults who have joined the work or are unemployed, to improve their knowledge and skills. Special education includes education for persons with disabilities such as visual impairment, hearing impairment, intellectual impairment, physical impairment, and emotional impairment, and implements a system combining integrated education and special education. It can be said that the state provides education and services suitable for persons with disabilities according to their special needs [14]. The US education system structure begins with nursery school and kindergarten. At the age of six, kids will be enrolled in elementary or primary school. At this stage, students can choose to enroll in middle school in 4th grade, enroll in junior high school in 5th grade, enroll in combined junior senior high school in 6th grade, or enroll in high school in 8th grade. In 12th grade, students will be graduating from one of the many kinds of high schools and receive a high school diploma. From there, if wishing to continue their education, they can go to junior or community college for generally two years of education then transfer to an undergraduate program, or directly enroll in an undergraduate program. After receiving an undergraduate degree, students can continue to enroll in a master's degree program or in professional school, which includes medical school, law school, theology school, etc. Further on, after receiving a master's degree, students can continue in doctoral studies, both after reviewing a Ph.D. degree or after accomplishing studies in professional school, students can continue in postdoctoral study and research.

Chinese education shows a rigid obsession with the basics. The Chinese government has invested a lot of money to ensure students' basic education, which helps poor students to change their current situation and have better prospects. It can be said that the National College Entrance Examination provides students with the opportunity to change their fate, but it also leads to many students facing anxiety and psychological pressure. Academic performance and the ideal university have become the criteria for students in Chinese education, which leads Chinese students to pay more attention to theoretical knowledge. Chinese education relies on an expected assembly line model to train students, and students lose innovative skills and employability [15]. In contrast, American education focuses on cultivating students' critical and innovative thinking and gives students more freedom to play. The American education system does not use academic achievement as the sole measure of students. The United States has a diverse curriculum to ensure that students master a variety of skills. This will not cause more stress for students but will allow students to have a pleasant learning journey. In particular, the combination of families, public schools and private institutions allows students to receive a diverse education and to acquire a diverse development of abilities and skills.

4. Government Role and Investment (Public Institution) Comparative Analysis

As for the government and federal role in the education system, the major contribution that Chinese government has is the nine-year compulsory education. According to the article 12 in the "Law of Compulsory Education", "The State Council and the local people's governments at all levels shall be responsible for raising funds for the capital construction needed to implement the system of compulsory education and for its operating expenses" [16]. The compulsory education is targeted on students from first grade to 9th grade, which includes the primary and secondary education. The empirical analysis by Ding Yanqin in 2012, based on small group study, shows that "although the enrollment rate in junior middle schools remains low and dropout rates are still very high in some regions, it is quite likely that significant decreases in the dropout rate have occurred in junior middle schools of poor regions in recent years" [17]. In comparison, according to the US department of education, "Federal contribution to elementary and secondary education is about 8 percent, which

includes funds not only from the Department of Education (ED) but also from other Federal agencies” [18]. This is a rather small shear of total education funding, but the US federal throughout history has had a kind of “emergency response system”, a means of filling gaps in State and local support for education when critical national needs arise.

5. Role of National College Entrance Examination in Chinese Education System

One of the most significant and widely debated issues in the Chinese education system is the pressure on students by “The Nationwide Unified Examination for Admissions to General Universities and Colleges”, which is known as the “National College Entrance Examination” for short. A news article by Haifeng Liu, a senior professor of liberal arts and director of the research center for science and examination at Zhejiang University, talked about several cases. The story of Qinghe Xiao, who studied hard with great perseverance in an extremely poor family and under extremely difficult living conditions and was admitted to the Department of Philosophy of Peking University in 1999. This is being commented as: “an extremely typical case of the bottom stratum’s retrogression and the largest magnitude of change of fate through the college entrance examination, and the most typical case of the college entrance examination’s promotion of the mobility of social strata” [19]. The meaning of the National College Entrance Examination to China as a nation, according to Zuo Cheng Lv: “is not only a process of selecting students for colleges and universities. It is also a process of constructing a national community. The state allows as many people as possible to take the college entrance examination to the greatest extent possible, and it regulates every aspect of the examination, from registration to admission... The unique qualities of efficiency and fairness of the college entrance examination are such that it is unlikely to be replaced by other selection systems shortly” [20]. As for its meaning to individuals, supported by data, performance in the National College Entrance Examination has a strong correlation with students’ future economic status. According to a recent working paper by Hongbin Li of Stanford University and Ruixue Jia of the London School of Economics, the National College Entrance Examination influences students’ economic prospects for years to come. By research, they conclude that the “hierarchical college system is endorsed by the labor market” [21]. This directly impacts students’ salary on a student’s first job, and that usually lays the foundation for their future career path. According to a survey done by Marcin Gierczyk and Rui Diao, Chinese students who attended the National College Entrance Examination can see that: “First, Chinese people still attach great importance to the college entrance examination. Second, China has constantly been correcting and perfecting the problems in the college entrance examination. However, it has not solved all of the issues. Third, anxiety exists among three senior students. Universities and relevant departments should effectively adjust the anxiety points, and parents and teachers should give them support and attention. Forth, unfairness exists in the college entrance examination...the imbalance of educational resources between regions and the difference in admission rate” [22]. From the responses from students, people can discover several issues besides the importance of the National College Entrance Examination. As part C from Gierczyk and Diao’s research result shows, the National College Entrance Examination creates huge anxiety and pressures on students. Based on the research done by Wenhui Yang et al., they found that “the transitional period from high school to college is a high-risk time for adolescent and young adult depression onset and some specific socio-psychological risk factors involving depression among youth in China” [23]. This means the National College Entrance Examination system is directly and indirectly contributing to the growing mental health issue of Chinese teenagers. As part D from Gierczyk and Diao’s research shows, even the National College Entrance Examination provides relatively fair opportunities for students from a variety of social classes with different economic capabilities, there is still a huge uneven distribution of education resources and opportunities in the modern Chinese education system. Ye Liu in his paper states that the National College Entrance Examination is a kind of meritocracy selection process. She argues that “social Stratification and socio-demographic disparity seem to have been transmitted into

opportunity structures through the educational system [24]. The National College Entrance Examination selection induced lower social groups, such as the working class and peasants who lost their previous social security and welfare during the reform, to believe that they are scholastically inferior in the competition for higher education opportunities” [24].

6. The Impact of Neoliberalism on US Education System

Neoliberalism inherits the idea of classical liberalism, proposing back to the market-free capitalist society and opposing state intervention over economic activity, with deregulating financial activity, letting the society freely invest and trade. Neoliberalism has made the education system more utilitarian, and the institutions being commercialized, the priority focus of a college or university is not to educate intellectual individuals but to gain profit in the competition and produce efficient labor capital for society. Wendy Brown in her book “Undoing the Demos: Neoliberalism’s Stealth Revolution” argues that due to the utilitarian ideas in the society and labor market, education institutions have massively weakened the resources for cultivating liberal arts students, instead they shift their focus on producing efficient labor capital for the industries. The curriculum in those institutions also shifts from educating students as an intellectual individual to making knowledge and skills “as something for individuals to imbibe like chocolate” [25]. Similarly, Sayoni Bose in her paper points out that present college has been commercialized, and universities focus more on profit and cost cutting, which largely impacts the academic priority within the university, as well as the decision-making and resource allocation process. He argued that universities function for “the capitalist deviation of labor” , and universities are responsible for cultivating students as simply units of labor with scientific and business knowledge, as well as work ethic, skills, and discipline [26]. Outside the campus, neoliberalism has also reshaped student’s lives. Paul Chatterton from the University of Leeds demonstrates how neoliberalism affects many aspects of a student’s life as a college student. With the free market competition, luxury housing has occupied the student accommodation market, increasing the housing cost for students, and larger corporations started to build consumption places around the campus, seeing students as consumers and potential profit [27]. David C. Perry and Wim Wiewel in their research gives another aspect of universities’ commercialization under the influence of neoliberalism. Engaging in real estate development and urban construction projects reflect the need for universities to generate revenue streams outside of traditional funding sources [28]. On the other hand, this idea of neoliberalism and competition among education institutions also has positive outcomes. Clive R. Belfield in his paper studied in depth the competition effect among US education institutions. For public schools, there are three layers of competition, among private and public education, between public school districts, and among public schools within a given district. This will increase the quality of the education system in the US, and Belfield examines the outcomes from several different perspectives. Through empirical research, the result shows that the competition has a positive effect on the academic outcomes of students, in many cases the higher the competition is, the higher the score is. Other than scores, he also points out that competition among schools can increase the percentage of students graduating and proceeding into higher levels of education, instead of dropping out from school. The competition among schools also has a positive effect on increasing salaries for both teachers and students once they graduate [29].

7. Conclusion

In general, Chinese education has a longer history than that of the United States and has a whole set of theories on talent training. This is to promote the all-round development of talents and to strive to improve the overall literacy rate of the people. The history of education development in the United States is not long, but it has built a unique education system full of liberal colors. The United States practices a three-dimensional approach to education, that is, families, public schools and private institutions work together to promote the talent development process. Of course, the data show the

difference between China and the United States in terms of educational penetration. This does not mean that the United States has a worse education penetration rate than China, because many American students are home-schooled. Different historical traditions, political structures and cultural customs and other factors have led to completely different educational models in China.

The educational systems of China and the United States present a kind of complementarity. China attaches great importance to basic education, and the Chinese government has invested a lot of money to ensure the basic education of students. This can break down inequalities and give students the chance to change their fate and find better jobs through the National College Entrance Examination. The combination of education and degree has become a key consideration for organizations in selecting talents. Because of this, students have an attachment to good universities. It is precisely because of the National College Entrance Examination that many students face great psychological pressure and anxiety. The only goal of many students is to be admitted to a good university, while Chinese students pay more attention to theoretical knowledge lack innovative thinking and critical skills, and even gradually lose sports, music, and other courses. This is in stark contrast to American education. American education attaches importance to the cultivation of students' critical and innovative thinking and gives students more freedom to play space. Academic performance is not the only criterion to measure students, and the United States has a diverse curriculum to ensure that students master a variety of skills. This will not put more pressure on students and will allow students to have a pleasant childhood. In particular, the combination of home, public school and private institutions allows students to receive a diverse education and have more opportunities. Of course, the United States government should pay more attention to basic education and strengthen its financial investment, which should be learned from some measures of the Chinese government. When America markets education, it pushes universities to raise costs for higher profits and lower costs. Such market competition may not be sustainable for American education. Based on such considerations, the complementary advantages of China and the United States in terms of educational mechanisms may have better results. This means that a good educational mechanism should be a semi-open teaching method that emphasizes the cultivation of students' basic knowledge, innovation and development of critical thinking, and students have more choices when entering the university rather than relying on entrance exams. This can reduce student anxiety and make education truly accessible to a wider group of students. In particular, investment in education must be guided by policy and supported financially, avoiding the complete commercialization of education, which would only distort its original purpose.

Both Chinese education and American education have neglected the practice in the process of university education. This kind of education can make students face challenges in the process of finding a job after graduation. A big dilemma is that students find that there is a complete mismatch between their theoretical knowledge and practical skills. This makes it difficult for many students to find an ideal job after graduation, and even face the dilemma that graduation is equal to unemployment. When education is completely divorced from employment considerations, it is a disaster for any education system and its students. Contemporary education has a high penetration rate, and the purpose of education has become more oriented towards promoting employment and good career development than literacy. In this context, both China and the United States must consider allowing students to quickly establish their target career and have the opportunity to experience a real working environment during the study phase. This will effectively reduce the transition phase from school to the workplace and reduce anxiety among students. Germany's dual-track education system is a very useful reference. Based on the consideration of students' interests and strengths, teachers will advise students to choose to learn theoretical knowledge or directly enter the skills learning stage. This skill learning means that students will spend most of their time at the internship company and less time on theoretical study. Schools and enterprises form cooperation. Students can effectively combine theory and practice and fully link their learning process to employment. In this way, once the students graduate, they will become regular employees directly. They do not need to worry about losing their jobs. The students who choose studying theoretical knowledge, will supplement

Germany's scientific research and other fields of talent demand. This kind of education system makes the purpose of education clearer, and constructs a reasonable talent development path, which has positive reference value.

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