

Comparative Analysis of Chinese and American Higher Education Policies

Jiaxuan Jin¹, Yuhan Lian^{2, *}, Xiaochang Liu³

¹Department of Education Science, University of California, Irvine, Irvine, CA 92697-0001, The United States

²School of English Studies, Tianjin Foreign Studies University, Tianjin, 300450, China

³IOE, Education, Practice and Society, University College London, London, WC1E 6BT, The United Kingdom

*Corresponding author email: ylian5@jh.edu

Abstract. The development of higher education in China and the United States has garnered global attention, given their influential positions in the international arena. This paper examines the disparities in higher education policies between the two countries, considering their political, economic, and cultural differences. While China and the U.S. share common objectives and approaches in higher education, notable distinctions arise in terms of technological advancements and intellectual property protection. These variations are particularly evident in policies pertaining to talent cultivation, science and technology innovation, and financial support for higher education. These disparities can be attributed to the unique societal, economic, and socio-cultural contexts of each country. To enhance China's higher education policy framework, this article proposes three key areas for optimization and supplementation: university competition policy, talent cultivation and attraction policy, and higher education focus development policy. By strengthening the interconnection between higher education and practical applications in society, these proposed enhancements aim to bolster the overall effectiveness and relevance of China's higher education system.

Keywords: Higher Education, China, United States, Policy Comparison.

1. Introduction

Currently, the discussion centers on the differences in education among nations across the world due to the expanding globalization of education. Because of a range of objective conditions, such as population, economics, and cultural belief, education in different parts of the world harbors different conventions and varies greatly. As a fundamental feature of modern society, each country puts high emphasis on local education to serve better for future development and competitiveness, for it serves as a cornerstone of the economic and cultural development of a nation and the cultivation of talents adapting modern requirements could be a determining factor of national competitiveness. Therefore, the information age could possibly bring a great opportunity to make collaborative progress by providing contrasts and reflection of different education to learn from and improve drawbacks. In this way, reform in education in several countries has been taking place consistently to witness local shortages from international contracts and advanced systems in other regions.

This essay will compare the educational policies in higher education between China and the United States, where the education shows a range of opposite patterns, such as different emphasis on outcome-driven systems, collaborative mindset, rote learning and liberal education. By exploring the contrasting aspects of Chinese and American higher education, it would then draw into the conclusion of how educational concepts, practices and outcomes differ between higher education in China and the United States. Lastly, the measures in both countries based on the contrasts will be discussed to provide a referencing model for educational reform in different countries across the world.

2. Similarities in Chinese and American Higher Education

Chinese and American higher education share commonalities in their objectives and approaches. One significant similarity is the emphasis on technological advancement research. In the rapidly evolving and information age, both education systems recognize the need to develop competitive talents capable of adapting to technological advancements. This emphasis on technology is driven by the demand for I.T. workers in the job market and the increasing importance of mathematics-related occupations in the socio-economic landscape. Furthermore, as the world becomes more globalized, technology in the form of digitalization serves as a direct connection and contrast among nations, significantly influencing their core influence. In response to this demand for advancing technology, both China and the U.S. have implemented measures to enhance technological development through higher education research.

Moreover, technology in data engineering plays a crucial role in linking countries and impacting their competitiveness in a globalized world where national barriers are gradually diminishing. Despite the existence of language and cultural differences, digitalization technology serves as a direct connection between nations, greatly influencing their core strengths. In response to the growing demand for technological advancement, China and the U.S. have implemented measures to support and enhance their research efforts in higher education. For instance, the Chinese government enacted the law on promoting the transformation of scientific and technological achievement (PTSTA) in 2015, granting universities greater autonomy in conducting academic technology research. This simplified procedure and enhanced confidentiality contrast with the previous limitations imposed on state-owned educational institutions, signaling a shift towards more comprehensive management of Chinese universities. In addition to this, the state council, along with the Ministry of Finance and the Ministry of Education, has implemented policies and allocated funding to further support academic technology transformation.

By focusing on relevant research in higher education, China and the U.S. are actively working towards meeting the demands of advancing technology and ensuring their competitiveness in the global arena. As a result of these efforts, four Chinese universities are among the top 10 patent application authorities worldwide, demonstrating their significant contributions [1]. Similarly, universities and authorities in the U.S. have increasingly encouraged academic projects through University Spin-offs (USOs) to maintain a leading position in modern technology strength. These examples highlight the shared objective of enhancing technology through higher education in both China and the U.S.

Higher education align is the growing focus on intellectual property protection. In the modern knowledge economy, knowledge and academic output are valuable assets. Consequently, piracy and plagiarism pose significant threats to authors and researchers. Protecting copyright and intellectual property has become an urgent issue for many nations, including China and the U.S. While both governments emphasize the importance of academic property protection in local education development, the U.S. has achieved more notable success in this area compared to China. The U.S. established copyright and intellectual property laws as early as 1790, continually evolving to create a more secure authoring environment. Additionally, top-ranked U.S. universities and educational institutions primarily receive funding from private sectors, contributing to a comparatively unlimited publishing environment. In contrast, academic output in Chinese higher education is predominantly state-owned as government-funded institutions administer research and have political administration structures, potentially creating more barriers to academic exploration. However, China has made progress in addressing these challenges. For example, since 2015, academic research in higher education no longer requires administrative permission, leading to an improved authoring environment and simplified process for academic study. The introduction of the “first-file-rule” in 2013 ensures the exclusive copyright of authors upon registration. Consequently, despite the time gap in enacting intellectual property protection laws between the two countries, both China and the U.S. are working towards creating a secured academic environment and supporting research in higher education.

In conclusion, Chinese and American higher education demonstrate similarities in their emphasis on technological advancement research and intellectual property protection. Both education systems recognize the importance of developing competitive talents and fostering a secure environment for academic pursuits. While there may be differences in specific approaches and achievements, both China and the U.S. are committed to enhancing technology and protecting intellectual property in higher education.

3. The Differences Between Chinese and American Higher Education

The development of a country cannot be separated from the development of education. Higher education, as a key part of national talent training, has become one of the important indicators of contemporary national development. The United States is a major country in the world of higher education. It is at the forefront of education development in terms of teacher construction, talent training and scientific research achievements. Since the New China was founded in 1949, the country has continued to make efforts in the construction of higher education policies. The universities in China have not only increased in quantity and scale, but also improved significantly in quality. This chapter will focus on the differences between Chinese and American higher education from following three aspects, which are teaching staff construction, science and technology innovation policy and fiscal policy.

3.1. Teaching Staff Construction Policy

In terms of the title of teachers, Chinese universities conduct the teacher position system, that is, college teachers are composed of professor, associate professor, lecturer and teaching assistant. The title of American teachers is quite similar to that of China, which implements a single title system and is divided into four grades: professor, associate professor, assistant professor and lecturer.

In regard to higher education teacher employment conditions, it is still common for college graduates in China to choose to stay and teach directly in their universities, which makes it difficult to generate innovative and creative results in scientific research due to the single and localized faculty. However, since the promulgation of Trial Regulations on posts in higher education in 1986, the new employment system makes universities and teachers equal contractors in the law. It is also worth mentioning that schools can recruit teachers openly to the public, thus broadening the source of teachers. The reform of employment conditions has also broken the shackles of the tenure system of teachers, thus promoted the flow of talents and the development of academic diversification to a certain extent.

As early as 1940, the American Association of University Professors and the Association of American Colleges and Universities issued the *Statement of Principles on Academic Freedom and Tenure*, and the tenure system officially came into being [2]. However, this does not mean that teachers can teach for life once hired. They need to follow the principle of “either promotion or leave”, which means if they are not promoted or fail to pass the assessment during the teaching period agreed with the school, they need to terminate the contract relationship. Moreover, the faculty of American colleges and universities is international and diverse, attracting outstanding faculty from all over the world. Its education internationalization strategy policy stipulates that graduates of the university shall not be eligible to be hired as one of the faculty members unless they have any experience or honor in work or research area, which also raises the threshold and quality of the teaching staff.

3.2. Science and Technology Innovation Policy

In order to improve the national scientific research level, the Chinese government has annually increased the investment in science and technology in universities. A series of policies has been promulgated to protect the intellectual property rights of scientific and technological achievements in universities, so as to arouse the enthusiasm of teachers and students in scientific research. The earliest university science and technology policy is the “Decision on the Reform of Science and technology

Systems” in 1985, which first promoted the cooperation between agricultural research institutions and universities, and built the long-term participation of colleges in practical technological innovation. According to the latest statistics of the Ministry of Education, the funding allocated for scientific research and experimental development in Chinese universities has raised from 76.87 billion yuan in 2012 to 159.2 billion yuan in 2021 [3], with a total of over one trillion yuan allocated in ten years. At the same time, universities have led the construction of more than 60% of the national key laboratories of disciplines and 30% of the national technology research centers, thus improving the quality of innovation achievements.

In the United States, as early as 1945, George W. Bush published *Science, the Endless Frontier*. The report pointed out that the government should vigorously support the research and development of universities and set up the National Science Foundation. In 1947, the implementation of *Science and Public Policy* not only emphasized the importance of cultivating national scientific and technological talents, but also proposed to promote exchanges and cooperation between American scholars and international scholars. Until the beginning of the 21st century, the United States issued scientific research policies such as “*Science in the National Interest* (1994)” and “*Science of Science and Innovation Policy* program (2006)”, proposing to continuously increase the intensity of research funding and personnel training for research universities. The vision of the U.S. government in higher education policy has resulted in the United States having nearly 230 universities in the Q.S. World University Ranking, leading in 32 subject rankings.

3.3. Fiscal Policy

China adopts the funding mode of direct allocation by the government to invest special funds in various universities. At present, the financial funds for higher education in China mainly come from the state fiscal funds for education, taxes levied by governments at all levels for education, funds for running schools by enterprises, and funds for running schools by individual citizens [4]. Although the Chinese government has continuously introduced relevant policies to increase support for education, the financial funding for higher education only accounts for 20% of the total funding for education, and the proportion of education investment in GDP is still lower compared with that of the United States. In terms of discipline development, China adopts an egalitarian allocation method for university discipline construction, without setting a specific focus on the general direction. To a certain extent, this distribution mode can enable universities to focus on building superior disciplines according to their own characteristics, but it may also be at a disadvantage compared with the discipline investment of other countries.

In contrast, the fiscal policy of higher education in the United States is based on the government, which is allocated and managed by the federal government, the state government and the local government. Financial support for universities is provided through the establishment of projects and contracts by national organizations. Moreover, the financial assistance direction of the U.S. federal government for colleges and universities is closely related to the national strategic security and the international situation. Therefore, the emphasis on disciplines will be timely adjusted according to the needs of the situation.

4. Key Factors Influencing Chinese and American Higher Education Policies

The aforementioned discourse explores the resemblances and divergences in the higher education policies of China and the United States, underscoring that the formulation and execution of educational policies are shaped by multifaceted influences. In both cases, political and ideological considerations, economic determinants, and cultural and social elements can elucidate the performance of each country’s higher education policies. Moreover, this analysis serves as a cornerstone for subsequently presenting enhanced higher education policy frameworks that can be adopted by other nations.

Political and ideological factors play a prominent role in the formation of higher education policies in both countries [5]. In the United States, policies were influenced by individualism, free market principles, and decentralized governance structures [6]. The current state of higher education reflects a multifaceted landscape characterized by competition, choice, and independence. In contrast, China's higher education policy is strongly influenced by socialist political ideology and a centralized governance structure, as noted by Kipnis [7]. The government assumes a significant role in determining the trajectory and emphases of higher education, prioritizing national development objectives such as technological advancement, innovation, and workforce readiness. To align higher education with these objectives, the government exercises control over curriculum content, enrollment quotas, and resource allocation.

Economic factors exert a substantial influence on higher education policy in both nations, as highlighted by Salmi [8]. In the United States, policy development is shaped by a market-driven economy and the recognition of higher education's pivotal role in attaining economic prosperity, as elucidated by Kromydas [9]. Consequently, a strong emphasis is placed on vocational and professional programs, collaborations with industries, and research funding geared toward enhancing economic competitiveness. The system's market-oriented nature is reflected in the often-elevated tuition fees and prevalent student loans. Conversely, in China, the impetus for higher education policy is derived from rapid economic growth and the aspiration to foster a knowledge-based economy. The government has invested heavily in higher education as a means of improving human capital, promoting innovation, and meeting labor market demands [10]. Policies prioritize science, technology, engineering, and mathematics (STEM)-related disciplines, with a focus on producing graduates with skills relevant to the evolving economy. The government also promotes university-industry partnerships to facilitate technology transfer and commercialization.

Ultimately, cultural and social factors exert a substantial impact on the formulation of higher education policies in both nations [11]. In the United States, policies are imbued with cultural values of individualism and personal autonomy, evident through an emphasis on academic freedom, diversity, and inclusivity [12]. Renowned for its liberal arts education, the American higher education system offers a diverse array of disciplines that foster critical thinking and civic participation. Conversely, in China, cultural values such as deference to authority and the significance of education shape higher education policies. Influenced by the Confucian tradition, which accentuates meritocracy and societal upward mobility through education, China's policies strive to provide equal opportunities for all citizens.

5. The Suggestions of Chinese and American Higher Education Policy Research to Chinese Education Policy

As a decentralized country, the federal government of the United States makes the university research funds flow into the schools with higher education quality and subject development quality through project competition every year. This fair competition among colleges and universities has enhanced comprehensive strength and scientific research enthusiasm. Such a competition mechanism can be borrowed and introduced into the field of Chinese higher education. Implement the financial allocation model of performance evaluation to optimize the allocation of higher education resources.

The development of teachers in Chinese universities requires that the individual development of teachers be subordinate to the development needs of society, and the color of collectivism is usually the main theme. As a result, the teacher team is often subject to the unified management of universities and lacks a certain work initiative. The Chinese government should pay more attention to the training of teachers in colleges and universities and provide the guarantee of system policies and funds. The platform and method of teacher development training should be innovated, the career development plan of teachers should be improved, and the overall teaching vitality should be stimulated.

Investment in science and technology is a powerful guarantee for scientific research in universities. At present, China's investment in science and technology in universities is generally insufficient and

wasteful compared with that of the United States. Therefore, the government should increase the amount and intensity of investment in scientific research at universities. Meanwhile, formulate reasonable scientific research security policies and introduce more scientific research talents through preferential policies. Clarify the status of higher education in the national scientific research system, and make clear legal norms for scientific research activities in universities.

6. Conclusion

China and the United States exhibit shared aspirations in prioritizing science and technology within higher education, and both possess analogous degree systems and academic assessment practices. Nevertheless, noteworthy disparities emerge in terms of faculty development, science and technology innovation policies, and university financial strategies. The divergence in higher education policies between China and the United States can be attributed to variances in political and social ideologies, economic progress, and social and cultural factors prevalent in each nation. Consequently, by scrutinizing the interconnections between diverse social frameworks and the efficacy of higher education delivery, this study offers several recommendations for refining China's higher education policy. Firstly, it is imperative to establish a judicious competitive mechanism among higher education institutions to foster the advancement of educational quality in China. Secondly, robust financial backing should be harnessed to bolster the nation's reservoir of talented individuals within higher education, thereby fostering their innovative capabilities. Furthermore, higher education should augment the proportion of scientific and technological investments in research endeavors to forge a close nexus between university education and societal progress.

The research topic at hand is an ambitious one, and it is essential to acknowledge certain limitations within this study. One potential constraint lies in the potential oversimplification of intricate policies due to the expansive nature of the subject matter. Furthermore, the analysis presented in the article might not fully encapsulate the dynamic nature of policies as they evolve over time. Additionally, data availability and potential biases in data interpretation could affect the study's validity and reliability, thereby imposing restrictions on the study's findings. To address these limitations, future research endeavors should engage in comprehensive case studies, incorporate longitudinal data, and ensure diverse perspectives. Moreover, exploring the impact of global trends, technological advancements, and evolving socio-political environments on higher education policies will yield valuable insights for forthcoming research endeavors.

Authors Contribution

All the authors contributed equally, and their names were listed in alphabetical order.

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