

Overview of Higher Education Comparisons between China and United States

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Abstract. This paper will provide an introduction of comparing the higher educational systems in China as compared to the U.S. The purpose of this paper will show general differences of higher education between the two countries and how each system might build on the strengths of the other. This paper introduces a vision that we will learn to understand the current differences in education between China and the U.S. in order to capitalize on collaboration and to provoke educators into a new way of thinking.

1. Introduction

Educational systems in both China and the U.S. are being transformed especially higher educational system. The methods, forms and approaches to education are going through tremendous changes to keep up-to-date with technology and the global marketplace. Both China and the U.S. are competing to be the best in education, particularly science, energy and future innovations. We are at a crossroads in education that is wise to address -- is it time for these two nations to work together and how might they address the educational system changes?

The paper is organized as follows. Comparisons of higher education between China and the U.S. are proposed from different perspectives in the next Section, including higher educational systems, course formats, teaching methods, research systems and trends. Section III draws a conclusion and future focus.

2. Comparisons of Higher Education between China and the U.S.

2.1 Higher Educational Systems Comparison- China and U.S.

Education is the cornerstone of China's national development and social progress. It is the fundamental way to improve the overall quality of the population and promote the all-round development of the people. Education carries the hope of hundreds of millions of Chinese families for a better life.

In China, higher education is divided into two main categories according to different educational formats: full-time higher education including general higher education and vocational higher education, and higher adult education. The general higher education universities are typically public, governed by central or local governments. The latter is governed by the Ministry of

Education of China. The school systems could vary, based on different professional organizations or the Administrative Departments of Education for each Province[1,2].

According to the training objectives and the study length, the general higher education in China is typically divided into three phases: higher junior college, undergraduate and graduate education. First, higher junior colleges recruit graduates from high school, and the schooling lasts two to three years or graduates from middle school are recruited and the study lasts five years. The goal of study is to cultivate middle-level technicians with practical application techniques. Second, undergraduate universities typically recruit graduates from high school or the same level students. The length of study is four or five years for specialized majors, such as medical science. Third, graduate level students focus on basic theoretical knowledge and techniques, which are the main part of higher education in China. Graduate education lasts two or three years for students with a Bachelor degree or an equivalent degree. A Doctoral education is the highest educational level and takes a longer time to obtain, in general, it takes five to eight years. *master*

Vocational higher education is organized by local governments or social organizations which is a short-term education, primarily two or three years. It is equivalent to junior college, and the objectives are focused on the combination of theoretical knowledge and practical techniques.

The second category is higher adult education, a continual education system for students aligned with their chosen career. It could be part-time or full-time. This kind of education focuses on specific fields, such as radio and television universities that use TV or other modern teaching methods to teach long-distance students. This is similar to online courses in the U.S. This system also contains universities for people who are employed.

Compared to China, the U.S. has both public and private universities that provide degrees from Bachelor to Doctoral. In addition, the U.S. higher educational system has junior colleges such as community colleges which are one of the important components for the public university system and provide a two-year Associate degree. Community Colleges are usually independent of the general universities. Community colleges are a vital part of the postsecondary education delivery system. They serve almost half of the undergraduate students in the United States, providing open access to postsecondary education, preparing students for transfer to four-year institutions, providing workforce development and skills training, and offering noncredit programs ranging from English as a second language to skills retraining to community enrichment programs or cultural activities. Community colleges, such as Tidewater Community College in Virginia, now partner with four-year universities, e.g., Old Dominion, University of Virginia and College of William and Mary, enabling easy transition for Associate degree students to transfer to four-year universities. Typically, the cost of community college courses are lower yet sustain a high quality level of education, opening up opportunities for a wider income level of students to attend and providing time and space for students to experiment with the rigors of an academic pursuit.

The U.S. has recognized the benefits of community colleges at a 2010 Presidential Summit and has set educational goals. About half of all first-generation college students and minority students attend community colleges. It is a remarkable record. No other system of higher education in the world does so much to provide access and second-chance opportunities as American community colleges[3].

Comparing the educational systems in these two countries, the social acknowledgement for public and private universities is different. In China, public universities are primary choices for the high school graduates. It is not easy for a student with a Bachelor degree from a private university or without a Bachelor degree to obtain a decent job in China, except very few unique majors.

Gradually, these unique majors also require a Bachelor degree in the near future. Every year, there is a high demand for Bachelor degrees in the employment market in China. In 2013, approximately seven million undergraduates will graduate from universities, around 190,000 more than in 2012[4]. Education is one of the most coveted assets to employers. On the contrary, in general, the top universities in U.S. are private universities although some public universities have now become top competitors. Regarding the U.S. employment market, degrees are still the first requirement for U.S. employers for professional jobs, however, past job experiences, particularly international experience, community service and continual education are a close second consideration. In the U.S., the degree requirement is contingent on the job. For fields such as medicine, law, accounting, engineering, education, a Bachelor or higher degree is required. For jobs such as human resources, management internships, marketing, it depends on the job and an Associate degree may be acceptable, at least for an entry-level position.

2.2 Course Formats Comparison

Many formats of courses have evolved in American higher education such as face-to-face lectures, online lectures, a combination of face-to-face and online, or independent study for graduate students. However, in China, only face-to-face lectures are widespread. One reason for the U.S. diversity of formats may be the student composition. American students are different ages, the majority join the university while they are enrolled in high school or directly from high school. Many students work full and part time and have family responsibilities. Students with a job and a family need flexibility and the university system accommodates them. Online courses are becoming more and more popular. Senior citizens are also going back to college and pursuing continual education.

Compared to American college students, most Chinese college students enter college from high school and may not have the maturity as more seasoned learners. The majority of students are single, without family burdens. Even though some students from rural areas have financial problems, loans are available to earn a degree. Therefore, college students in China take part in class primarily face-to-face in the daytime. Chinese college students readily accept whatever course format is offered. They are more willing to choose face-to-face courses that are easily accepted by the society in China.

2.3 Teaching-Methods Comparison

Both social factors and cultural environment differences induce the teaching methods differences. United States upholds freedom and individuality, therefore, students in class are more relaxed. Faculty and students are more like colleagues. They feel free to exchange ideas and discuss questions freely in class. However, because Chinese traditional cultures with a strong sense of hierarchy and a collective nature, students follow more rigid norms and rules in class, for example, students must raise a hand for a question and stand up to ask a question. On the contrary, American students in class are encouraged to stop the faculty's lecture anytime if one has a question about the lecture. In China, students treat faculty with awe and formalities. Therefore, students are very careful with faculty. This seems to result in a power distance between students and faculty. As Organizational Studies Researcher Geert Hofstede mentions, power distance is a cultural factor. It is evident in the classroom in both cultures[5].

Due to the above analysis, different teaching models are also employed. First, most faculty in China are always serious in class for the lectures. American classes are more informal, even adding appropriate humor and personal experiences, as well as class lectures are often modified based on student participation. Second, many faculty in China tend not to focus on interactive activities in class, however, there are different and unique class activities in American class which motivate student's enthusiasm and are more participative. Group activities are common. Third, most class

types in China are face-to-face lectures and very few other formats. Fourth, competition for Chinese students before college study is very competitive and more energy is spent during this period as compared to after they enter college, where the environment is relatively relaxed. Therefore, Chinese students become less motivated. It is important to note here that both Chinese and American students respect their teachers but there is a subtle relationship difference. American teachers are very accessible to their students, serving as career and life coaches and mentors and sometimes becoming friends after education is complete. Chinese teachers have a wider power distance based on tradition.

Teaching methods in China are changing at a rapid pace. First, China is opening wider and wider, and the communication methods are growing rapidly, therefore, college students have more ways to learn about the world. Second, student characteristics differ from one generation to generation. For the stage of current college students, they are longing for freedom and less restrictions. In America, this generational difference is called Generation Y[6]. Third, with the development of educational globalization, faculty members are thinking about how to find a teaching method to adapt to the new learners. For example, Blackboard software is widely used in teaching that provides a platform to communicate between students and faculty in both countries. For engineering college students, more practical courses are set-up for hands-on activities. American faculty are experimenting with courses without textbooks, instead using online resources. Online courses also have the luxury of allowing global participation.

Every year, only certain percentage of students can get the chance to enter colleges in China. Therefore, students have huge pressure during high school to study because of the high competition for entrance. When students are accepted and start their college study, they are inclined to relax and feel a release from social and family pressures. Some students are more indulged in electronic games and gadgets and neglect their studies. Due to this scenario, specific faculty who are in charge of student daily life on campus have to pay more attention to students. As a lecturer, one has to notice the change in student's interest in class, in addition, employ different teaching modes to adjust teaching methods and motivate students to focus on class lectures.

In America, students compete for universities but there are so many options, including community colleges, the competition is not as keen except for the top universities. Financial aid and loans are available and the lower priced community colleges are also an option. Students can take several courses in a university without officially being admitted and online universities are becoming commonplace and credible. Many employers finance education and prefer continual learning. Education is open to everyone and students can start and stop majors or universities. Thus, instead of American students competing for universities, it seems like universities are competing for the student's enrollment. Students also evaluate teachers, anonymously after each class, and student evaluations impact the educator's performance. Thus, Professors are motivated to be engaging and innovative for full enrollments. American students are motivated by knowing that an education will increase their employment opportunities and their standard of living.

2.4 Research Systems Comparison

Aside from teaching, research is one of the most important aspects for university development. In China, most universities are combining teaching and research. With the development of society and communications around the world, more and more academic opportunities are appearing in China from both the central and local governments such as National Science Foundation of China (NSFC) and various local science foundations only for the universities in those areas along with funds from companies and different commissions. Correspondingly, China is also developing a complete system of monitoring and management. In this area, the U.S. has complete, consistent,

world-recognized academic and evaluation systems which are also the system most countries emulate for academic universities. And, they are continually making quality improvements, open to global-initiated teams.

Academic freedom, academic autonomy and academic independence are the most central academic principles to a successful educational system which is innovative[7]. Based on these principles, the U.S. has constructed a complete academic evaluation system including peer evaluation systems, anonymous paper-reviewing systems, violation-consequence systems and academic norms.

As for this system, first, all of these principles are according to academic researcher and academic team self-discipline. This depends on the importance of the honor education and supervision. Second, improve academic systems. Academic systems might be set up to include a quality academic audit and corresponding consequences, academic norms, academic education, and academic associations. A system might be based on an objective assessment criterion that avoids subjective factors. Third, this system is also based on an objective assessment criterion which avoids human factors, for example, personal connection might affect the assessment results. Fourth, a system might consider employing a reward mechanism to encourage researchers to spend more energy on education and research such as give rewards to the contributors according to their impact and their participation of the research results. In a similar circumstance, a tenure-track system is an acknowledgement for successful researchers in the U.S.

Currently, three initiatives might be considered by the government. First, academic evaluation systems in China might consider reinforcing academic moral education and setting-up academic honor systems. Second, research for the sake of furthering global knowledge as a prime motivator instead of eager research for quick success - focus on the quality, not the quantity of research. Third, the system might consider setting-up advice from a third academic party or team, such as monitoring whether the academic funds are used in a reasonable, accountable way in order to improve the quality of teaching and learning and meet the goals of the academic organization.

Regarding U.S. academic systems, three initiatives, all led by the Department of Education, with direct involvement of the President, are being implemented and are on the track toward a quality education for more people[3]. First, everyone knows that what gets measured, gets done. The new scorecard for each U.S. college and university gives students and their families statistical data that assists in decision making, such as average costs, graduation rate, median borrowing and employment[8]. This is percolating down to emphasize more focused performance measurements for faculty and administrators. Second, the recently launched the ConnectED Initiative, a goal to connect 99 percent of schools across the country to broadband internet within 5 years, starting at the elementary level[9]. Changing an educational system starts at the entry level and is a collaborative multi-Department effort, just recently begun. Third, The Administration is engaging the community colleges toward the 2020 national goal, that is, having the highest proportion of college graduates in the world to be in the U.S. Community colleges. Educational leaders are challenged to be innovative in increasing enrollment while continuing to be aligned with the national goal during times of change[10].

What could these two great countries do together? First, conducting a face-to-face meeting with all levels of the educational systems, from students to university Presidents, would be a first step. The purpose would be to address educational gaps and share major educational goals. Second, a meeting of interested countries could focus on technology and how it might help in cross-educational endeavors. Cross-education is the key to understanding another's culture as well as the content area and reciprocal education would open new learning possibilities. Third, set-up a structure in a strategic way to jointly address improving education in selected

economically-developing countries, for example, through technology and joint ventures with educators.

3. Summary

In conclusion, both American and Chinese educational systems are a point where motivation of students and teachers toward global learning is imperative. We propose that the best system is one of a trusting partnership where different people can learn together. How can we capitalize on each person's knowledge and motivation to learn while improving our educational systems to achieve this goal? Chinese quotations abound on knowledge and study. "The path to knowledge lies in study. After the study, knowledge of the things can be obtained[11]." Different teaching methods and research systems can be utilized for different countries, however, there is much time, space and energy evolving to work together with global transparency, for the greater good of education.

This paper begins to introduce differences in the higher educational system between China and the U.S. and possible reasons for the differences are analyzed. Course formats, teaching methods and research systems are compared in general. Suggestions for individual as well as collaborative educational pursuits are offered. This may lay the groundwork for further analysis to be conducted in such areas as the differences in entry standards of higher education between the two countries, how technology and educational collaboration can aid both countries, and new trends in collaborative education.

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References

- [1] <http://baike.baidu.com/view/119001.htm>
- [2] Shujin Fu, etc., *Higher Education*, Capital Normal University Press, 2007.
- [3] American Association of Community Colleges (AACC).
<http://www.aacc.nche.edu/AboutCC/Trends/Pages/default.aspx>
- [4] Ministry of Human Resources and Social Security of the People's Republic of China.
http://www.mohrss.gov.cn/jycjs/JYCJSzhengcewenjian/201305/t20130522_103580.htm
- [5] Hofstede, Geert, www.geert-hofstede.com.
- [6] Espinoza, Chip, Mick Ukleja and Craig Rusch, *Managing the Millennials*, John Wiley and Sons, Inc., 2010.
- [7] Yijun Liu, The Academic Evaluation System of the United States: Practice and Inspiration, *Journal of Zhejiang Ocean University (Humanities Science)*, vol. 26, no. 1, 2009.
- [8] The White House website. College Affordability and Transparency Center College Scorecard.
<http://www.whitehouse.gov/issues/education/higher-education/college-score-card>
- [9] Culatta, Richard. U.S. Department of Education official blog. Homeroom: Closing the Broadband Gap for Students and Teachers, June 7, 2013.

<http://www.ed.gov/blog/2013/06/closing-the-broadband-gap-for-students-and-teachers/>

- [10] U.S. Department of Education. Secretary Arne. White House Summit on Community Colleges, 2010.
- [11] Tongyuan Sun, Yanying Zhang, Jihong Liang, and Yuanmei Zhou, *The Chinese Classic Quotations*, XuYuan Press, 2010.