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INEQUITY WITHIN CHINESE HIGHER EDUCATION
WITH THE FOCUS ON HENAN PROVINCE

A Dissertation

Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Education

By

Zhe Ji

August 2016

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Zhe Ji

2016

INEQUITY WITHIN CHINESE HIGHER EDUCATION
WITH THE FOCUS ON HENAN PROVINCE

By

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Approved February 15, 2016

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ABSTRACT

INEQUITY WITHIN CHINESE HIGHER EDUCATION
WITH THE FOCUS ON HENAN PROVINCE

By

Zhe Ji

August 2016

Dissertation supervised by Connie M. Moss, Ed.D.

The purpose of this study is to examine the perceptions of students from China's Henan province regarding inequities they experience in the Chinese higher education system based solely on their geography. Henan students are required to score higher than students from other provinces on the Chinese National College Entrance Examinations (NCEE) in order to apply for admission into Chinese top tier universities. Yet despite having higher scores than their peers from other provinces and meeting all admissions requirements, Henan students have little guarantee of admission. The study systematically reviews the history of the Chinese higher education system to contextualize the impact of current NCEE policies and procedures. The perceptions of six Henan students currently studying in the top tiered

Chinese University were gathered using qualitative interviews and explored for commonalities and differences. The students' responses reveal a range of feelings from anger to acceptance, and even gratitude for the ways the inequities impacted their lives. This work increases our understanding of the link between geography and access to Chinese top tiered university and the effects of that link on students from Henan province.

DEDICATION

To my parents who always encourage and support my educational endeavors in the United States.

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First and foremost I would like to deeply thank my parents for all of their love and support. As single child and the first generation in college, I would never have been able to achieve the academic success and accomplishments without my mom and my dad.

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Chapter 1

Introduction

Education has played a prominent role within modern societies in China and continues to gain increasing importance. Chinese society takes great pride in its education system. With that comes the belief that a good education is necessary to provide better job opportunities combined with increases in economic benefits for Chinese citizens and society as a whole. On the surface, this sounds ideal and achievable, but has hardly been the case. Although education is valued among Chinese society, social status and other socioeconomic factors determine who is eligible for higher education. Schooling is directly linked to a student's background and the advantages or lack thereof are the by-product of what one's parents expose them to throughout childhood (Ishida, Muller, & Ridge, 1995). The inequalities that exist among Chinese students are contingent upon several factors.

In the Henan province a dire inequality among students in higher education settings is present. Existing inequitable admission policies and treatments have required Henan students to achieve higher examination scores in order to be considered for college admission (Wang, 2010). The most common well-known Chinese college admission entrance exam is the National College Entrance Examination (NCEE), or 'gaokao' as it is commonly referred to among the Chinese. It is the most widely used and preferred admission exam and is the primary tenet behind which college admissions are decided. According to You & Hu (2013), the examination has stringent guidelines and is applied

to ensure that those students who have met required cut-off rates for the testing would be admitted to college. The testing system has been used as a means of preventing “the possibility of corruption and unfairness in college admissions” (You & Hu, 2013), in keeping with Chinese ethical characteristics of fairness and equality (You & Hu, 2013).

Despite its best intentions, the examination system has resulted in K-12 educators teaching to the test in preparation of student readiness. To that end, the NCEE has become more of a “high-stakes exam” (You & Hu, 2013), which has placed enormous pressure upon students to pass it in order to be eligible for college admission all while inhibiting their creative sense and educational growth. To that end, students, particularly Henan students, find that they have to prove much more than other students. For example, Henan student’s abilities are determined by the rigorous testing process, and they also face multiple difficulties due to particular aspects of the current Chinese testing system. Henan students who obtain higher scores than their peers, still have a much lower acceptance rate at Chinese top tier universities. This and other academic inequalities that exist among Henan students has led to their inequitable treatment in relation to admission quotas, admission rates, and examination score lines. These inequalities warrant further observation and discussion.

Statement of the Problem of practice and Importance of the Study

Henan students have experienced inequities in Chinese higher education settings. These inequities mean that students from Henan province must achieve higher scores on the Chinese National College Entrance Examinations (NCEE) than their peers, with no

guarantee of college admission into Chinese top tier universities despite having higher scores than their peers and meeting all admissions requirements. This unequal playing field becomes even more severe when one considers that fact that in the Henan province, there exists only one Chinese top tier university, adding the lack of higher education resources to the situation that is already difficult to accept.

Clearly these factors and other call for strategic investigation into the inequalities that Henan students experience in Chinese higher education settings both to improve upon the current Chinese college admission system and also ensure that fairness and equity will be utilized when considering Henan students for admission to higher education institutions. Such an investigation would further the research specific to Henan province educational experiences and reforms that has been previously published regarding the dynamics and complexities of the associated with this issue for Henan students. A comprehensive study is needed in order to review, document, and describe what is currently known about the NCEE, current admissions policies, and geographical discrimination that exist in Chinese higher education settings in the Henan province.

Statement of Purpose

The purpose of this study is to examine the inequities in Henan province in higher education settings and to learn why this demographic of students are being subjected to inequitable admission policies and treatments. To accomplish this, various college entrance exams, particularly the NCEE, will be analyzed and compared for their admission quotas, rates, score lines, and fairness and ethical practices.

Research questions to be answered

In examining the inequities in the Henan province in higher education settings as they relates to the NCEE, admissions policies, and geographical discrimination, the following research question and sub-questions will guide this investigation:

- What is the causal explanation for the inequities experienced by students in Henan province in higher education settings?
 - Why is so much emphasis placed on college entrance exams as a requirement for admission?
 - Why do Henan students need higher college entrance exam scores than other students?
 - Why are Henan students routinely subjected to inequitable admission policies and procedures?
 - Why do Chinese top tier universities not select Henan students who have higher scores than their peers thus creating a lower acceptance rate?

China and its culture must be viewed in the context. Present day China is the product of an ancient civilization with more than five thousand years of glorious history that includes the people's revolution that led to modern times. To understand the cultural context of the current Chinese higher education system, then, it is necessary to systematically review and explore the overall history of Chinese higher education from an historical perspective. Additionally, that investigation must include a specific focus on the history of the Chinese exam-based system.

History of Chinese Higher Education

Chinese higher education has been continually molded and shaped by many factors. One such influential force was a feudal way of thinking that was a by-product of the doctrines adopted by Confucius (Du, 1990). This doctrine had a commanding influence over all aspects of Chinese higher education up until recent decades. Confucius has developed rich doctrines, for one example, Confucius tried to make education accessible to students from all social classes and education has been an equalizing force since then. Another factor was the influence of foreign patterns that persistently made their way into the country by foreign powers aggressive tactics and the Chinese adopting these as the norm for the sake of their impacts both politically and economically (Du, 1990). Both Confucius doctrines and foreign initiatives led the way for massive policy changes by the Chinese Communist Party (CCP) throughout the 1950's and 1960's (Du, 1990). The CCP was intent on changing higher education for political reasons. It was not until the late 1970's through the 1980's, that higher education began to change for the better through implementation of improved systems and overall efforts even though the Chinese socioeconomic conditions were not reflective of that.

Much of the earliest developments in education were derived from the ideologies of Confucius that were a lead-in to the Imperial period of civil service examinations. Confucius was a key player in the advancement of Chinese education. He believed that man's human nature was inherently good and thus, this human nature should be refined in order to instill values of wisdom and moral character. Once a human being reached this

level of perfection, he would be in tune with his fellow man and well equipped for handling world events as they occurred (Du, 1990).

Confucius further believed that everyone should be eligible to receive educational opportunities for growth and development. With hard work and persistent dedication, and the successful passing of all examinations, anyone could become an elected official (Du, 1990). Although this was Confucius' ideology, he was very particular about who he selected to enter into his teachings. He only chose the best students who he believed would excel in every possible way. His students would typically graduate and go on to become teachers and civil servants within society. It is interesting to note that Confucius' teachings and beliefs had an enormous impact on higher education through the ages up until around 1949, when Chinese education began to shift into more of a modern trend that evolved into what it is today.

The Imperial Period and Civil Examinations

The Imperial period was dominated by early Confucian ideology of educational equality for all. This ideology brought about the need for an imperial examination system that was given by the government. The purpose of the exams was to recruit and select individuals who were best suited for federal service jobs that were largely dependent on individual accomplishments and merits. However, in order to be a successful member of society and be eligible for service jobs, one had to pass rigorous civil examinations. Those eligible to take the exams were required to memorize large amounts of content and

write accompanying essays to demonstrate their knowledge and understanding (Du, 1990).

Formal education was for the intent and purpose of instilling values of leadership in order to hold official positions. The Chinese had been classified and treated as third-class citizens while under Mongolian rule. Positions of leadership were often assigned to “Mongols, Muslims, Tibetans, and other Central Asian peoples (Woodside & Elman, 1994, pp. 112), thereby granting them privileged status. This led to the Chinese people being restricted in many ways within their own country.

Because of these factors, China was considered a highly bureaucratic state in the late Imperial era. There were approximately 27,000 individuals holding official positions, within a country whose population at the time was 300,000,000 (Watt, 1970). The Song-Ming and Ch’ing dynasties of the Imperial era controlled and dominated all aspects of society. Civil service examinations materialized toward the end of the Ming dynasty when civilians were hand-selected to take the civil service examinations. The examinations served as a precursor to leadership and service within the society (Woodside & Elman, 1994, pp. 112). In order to become a chosen leader of society, the government used the civil examination system to weed out the true leaders from those who merely aspired to lead (Watt, 1970). Successfully mastering civil examinations, however, did not guarantee appointment to office. In some cases, participants had their names added to a waiting list that could result in waiting as much as twenty years before being called to appointment. This took great strength and perseverance to stay the course (Watt, 1970).

Another facet to the civil examination system was the enormous costs it placed upon families monetarily, emotionally, and mentally. Many people did not have the financial resources needed and were thus disqualified from being able to take the civil examinations (Watt, 1970). Although wealthy families had the means to financially afford the examinations, children within the families of those selected endured incredible hardship linked to upholding the future responsibilities that come with elitism and the expectation of passing civil examinations to secure their place within society (Watt, 1970).

It is critical to question, then, how much of a role social status had in the selection process and success rate of candidates who took civil examinations during the Imperial era. The examination system was comprised of four different examinations: “a qualifying examination, a provincial examination, a metropolitan examination and a palace examination” (Yang, Kurahaski, Ono, & Terano, 2012). Each person who took the examinations had to pass each one. With each examination passed the person was promoted and allowed to take the next examination. This higher one advanced along in the examination ranks also indicated a person’s level of knowledge and expertise.

Many took the examinations but few passed all of them. Approximately 100 out of 100,000 students passed the final examination (Yang, et al, 2012). The series of examinations took considerable money, time and resources to successfully pass. Those who achieved success by passing all the examinations had been formally trained and groomed for success. These individuals come from the most elite families within society,

supporting the notion that social status plays a huge role in which students were most likely to pass the rigorous examination process (Yang, et al, 2012).

Figure 1 shows the number of candidates who successfully passed all examinations and achieved the status of official leadership within society through the period from 1580-1900. Throughout this period, there were six examination years in which no candidates passed the examinations. The highest number recorded during this era of those candidates who successfully achieved all examinations was seven in 1840.

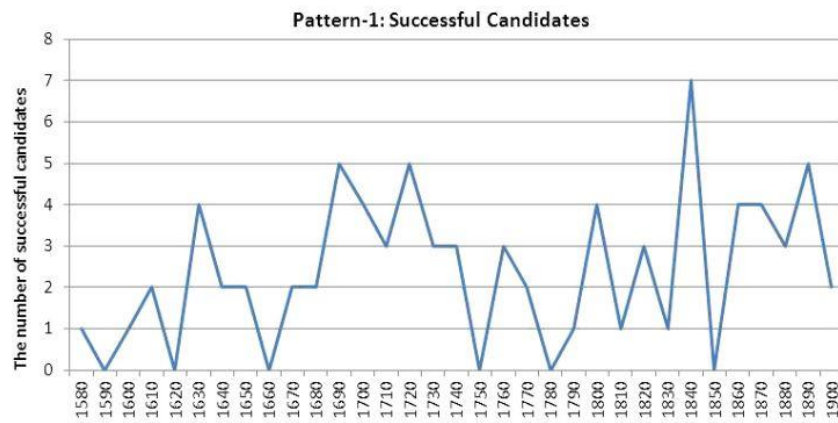


Figure 1: Pattern 1: Successful Candidates. From Pattern-Oriented inverse simulation for analyzing social problems: Family strategies in civil service examination in Imperial China, by Chao, Y., et al., 2012, *Advances in Complex Systems*, 15(7), 1-18.

Despite extensive education, if students were unable to pass any aspect of the civil service examinations, this meant a life relegated to being “minor functionaries” (Woodside & Elman, 1994, pp. 113), within society. Minor functionaries were held in little regard given the status quo of society’s most elite and the expectations that lie within it. It was the goal of every student to successfully pass their civil examinations as

this afforded the “sole guarantee of high political position and elite social esteem” (Woodside & Elman, 1994, pp. 114).

The civil examination system in imperial China was met with much criticism due to its stringent evaluations and effects on society as a whole (De Weerd, 2006). One of the most outspoken opponents on civil examinations was Zhu Xi. He created a manifesto criticizing the harsh realities of taking the civil service examinations and called for public curricular reforms in the examination process (DeWeerd, 2006). Zhu Xi singlehandedly paved the way for changes within the civil examination system that caught on like wildfire and appealed to many critics, who like Zhu Xi, who believed reform was the answer (DeWeerd, 2006).

This notion of learning leading to power during the Imperial period was resigned to only those from a small entity of the most socially elite (Chaffee, 1982). It was initiated by emperors, kings, and noted scholars like Confucius during the Song dynasty who valued learning for the greater good of society in order to produce upstanding citizens (Chaffee, 1982). There was a definitively skewed ideology by the literati that consisted of a large and expansive number of members who were being primed for leadership and power (Chaffee, 1982). The twelfth and thirteenth centuries beckoned many into the kinship of the literati in advance of the introduction of civil service examinations that would become the determinant of eligibility for only the most elite and prominent members of society who successfully passed the battery of examinations. The crop of candidates was culled from the vast pool of applicants. Competition among applicants to be selected for the examination process was very high. What began as

twenty or thirty thousand competing for an opportunity, increased to well over four hundred thousand by the mid thirteenth century (Chaffee, 1982). Meaning that the number of candidates vying for a position far outnumbered the opportunities available.

The shaping of formal education began long before students were eligible for the civil examination process. As children, students were molded and shaped accordingly in preparation for the future. It was the expectation that every student would be fully prepared throughout his schooling for the time when he would be ready to embark on the civil examination process (Yu-Wen, 2006). Primers were used during the Ming-Qing period to bridge the gaps between theory and practice in elementary education (Yu-Wen, 2006). This process points to a philosophy that was built on elitism and the generally agreed upon assumption about children and their educational goals (Yu-Wen, 2006). The purpose of schooling was not a matter of educating children for the purpose of education itself, but rather instruction was tailored to specific goals based upon Confucian indoctrination (Yu-Wen, 2006) that would enhance and elevate a student's chances for success in taking the civil service examinations.

The Content and Process for the Civil Service Exam

The Civil Service exam technically began very early, perhaps dating back as far as the Zhou or Tang dynasty (1046-256 BCE or 618-907) in the form of competitions and tests of skill (Kracke, 1967; Wu 1982). However, they really came into power, or solidified as a formal part of the Chinese culture during the Imperial period, as described above. The Civil Service Exam was designed to both determine each citizen's ability to

serve in governmental capacity, and to support the long-term continuation of the imperial system (Ebrey, 2010). This education was specifically designed to prepare students for the test. As such, it prepared students in the “Six Arts” or six areas deemed essentially important to governmental service (LunYu, 2013). These arts can be broken into two major areas: scholastic and militaristic, and include: music, arithmetic, writing, knowledge of ritual and ceremony, archery and horsemanship (Wu, 1982).

The test was predominately taken by gender males, early in its tenure, because education was limited for women during his period. Some females, however, did get an education and as a result ultimately engaged in the civil service exam. In later forms of the exams military strategy, civil law, revenue, taxation, agriculture, geography and Confucian literature were added as measures to be tested (Stanton et al., 2012). This educational system, in collusion with the use of the imperial civil service examinations are, by modern scholars, generally considered the first version of standardized testing conducted by a government or power (Hu, 1984; Lai, 1970).

This Civil Service Exam process allowed the governmental structure to maintain power, and garner the loyalty of the elites, especially local elites who might not otherwise have been able to decentralize regional control, and generate autonomous regions (Fairbank & Goldman, 2006). This was most prominently accomplished by testing, and recruiting based on results, at the regional level based on local population and need. The test was thus administered over 1,300 counties, 140 prefectures, 17 provinces, as well as in the capital region (Elman, 2009). This ensured that the “elite” was selected even in poorer, or poorer performing regions (Fairbank & Goldman, 2006).

The system was designed to provide meritorious government by granting those who were most deserving with government appointed positions and positions of power, (Elman, 2009). There were some citizens, however, who were restricted from taking the exam (Chu, 1967). Women and members of the clergy, for example, were always limited from inclusion in testing, as were those of the “mean” class that included boat-people, vagrants, prostitutes, entertainers, slaves, were banned from taking the examination (Chu, 1967; Naquin 1989). Occasionally, or under certain rulers, butchers and sorcerers were also excluded from testing, as were merchant, during the Ming and Qing Dynasties, and artisans during the Sui, Tang and Song dynasty (Chu, 1967). Over time, most of these social bans were lifted.

As a further limiting factor, the tests required a high level of education not readily available to the common student, and as such tended to promote the socially elite with more prominence. In fact “the archives recording data from the years 1500 to 1900 indicate that peasants, traders, and artisans, who made up 90 percent of the population, were not a significant part of the 2 to 3 million candidates who usually took the local biennial licensing tests (Elman, 2009).” This indicates that the upper 10% of the population, from a socio-economic standpoint, made up the majority of those taking the test. The truly ambitious individual, however, could use the test to become elite, by testing well and achieving upward social mobility as a result. Unfortunately, this was often not the case.

Less than 5% of those who tested successfully passed the exams, and there were only governmental positions, especially local governmental positions, for those who

performed well (Fairbanks & Goldman, 2006). Those who were educated but did not pass ultimately went on to serve in public, but non-governmentally sanctioned positions, such as education, local project management, and private enterprise (Fairbank & Goldman, 2006).

In terms of procedure, the time allotted for the completion of each test ranged from 24 to 72 hours, depending on difficulty and intricacy (Gao, 2009). Tests were conducted in locked rooms, where each student was in an isolated cubical. Each cubical was fully equipped with space to recline, as well as a desk and chair, providing opportunity for students to lay down and rest between testing sections, because of the testing's long and arduous nature of the testing (Hong Kong 2007).

Specific testing procedures were established with the goal of ensuring that favoritism was avoided and every exam given was a fair measure of a student's potential. First, students were never identified by name. Rather each was assigned a number during the exam, to prevent identification and preferential treatment (Fulcher, 2013). Next, each test was copied after completion by a third party to prevent accidental identification by hand writing. And finally, the proctor who copied these tests was never the same proctor as those who evaluated the test's scores (Fulcher, 2013).

Civil Service Exam Determinates of Success

The Chinese education system in imperial period is significant complicated and complex. In order to explore the root of the issues of exam-based system in China, it is important to explore the degree types and review the old fashion system within an historical perspective.

Success on the test was determined by performance. More specifically, testing was scaffolded by “degrees” forming a “ladder of success (Ho, 1962). When a test was passed, a new degree was earned, which enabled the individual to both take a higher ranking, more skilled, or more respected position, and qualified them to test toward a higher degree. There were several levels of testing, which moved the applicant toward “Jinshi,,” which would be considered educationally and socially equivalent to a PhD in an particular area of study today. These degrees included; tongsheng, shengyuan, juren, and jinshi (Ho,1962). Many of these degrees are also broken into sub-certifications that relate to specific government positions.

The Tong Sheng degree, or “child student” degree, was essentially a pretest. It served as an entry-level test, which was administered at the county level (Pepper, 2000). Those who passed this basic entry-level exam, gained, very simply, the right to pursue the series of more complex tests that followed (Pepper, 2000). It is immediately followed by a prefectural test that was also needed to complete more complex degrees (Pepper, 2000). This then leads to the *xiuca*i exam, or the “government student test” that allowed a student to become a member of the gentry class (Wright, 2011). As a result the title shengyuan is conferred on those that qualify. This allows them to sit for a series of gentry degree examinations, and completes the preliminary testing period (Pepper, 2000). Becoming a member of the gentry class had other benefits beyond the upward social mobility that it made possible, including decreased risk of corporal punishment, exemption from manual labor positions, and an increased right to travel (Ebrey & Walthall, 2013).

This gives way to the first full class of shengyuan, known as lingsheng. This is an elevated level of shengyuan titling, which is donned on the highest performers on their college exam. This high level of performance qualifies those bestowed with the lingsheng title to receive government-issued rations, and pay for their academic accomplishments (Hucker, 1985). It also qualifies them for study at the Imperial Academy, so that they can test for the next level of degree performance.

The next level of performance, as a subset of Lingsheng is Gongsheng, or the level of “tribute student.” These are students who have worked from the Imperial Academy who sit for the provincial and national exam, directly, and qualify for higher-level jobs and a certain level of prestige. To be more precise, it is this test that qualifies a degree holder to become a member of the upper gentry (Rankin, 1986). Those who rank highest become the highest ranking lingsheng, and the top class of shengyuan, and are conferred with Anshou, or “first on the desk” for being ranked top college examinees (Ho, 1962). The second class of shengyuan is then Zengsheng. This level of performance is literally translated “expanded student,” and represents a group of students who perform less well than lingsheng. They have the same legal perks, but are not paid a cash allowance during their expanded studies. Continuing at this level can be very expensive for families (Elman, 2009).

Those who perform below Zengsheng, but who have still passed the exams, are considered an “attached student” or a third class of shengyuan. This very low level of passible performance, called Fusheng, has no perks, and most performing at this level were never accepted to academy. They were substitutes, or understudies who were only

given an opportunity to move forward in rare cases, when there were spaces to be filled as the result of unforeseen circumstances (Ho, 1962). This concludes the levels of the shengyuan degree.

Those who chose to seek promotion beyond the shengyuan level work toward the title of “recommended man,” translated Juren. Those who earn the degree of Juren are qualified graduates of the Imperial academy who have passed the three-yearly provincial exams (Gao, 2009). These exams are given only once every three years, and proctored by the provincial governor (Gao, 2009). Those holding the Juren degree were qualified to hold government positions, but the reality was there were far fewer positions available than there were qualified applicants (Gao, 2009).

There are multiple classes, or rankings, of this Juren degree as well. The highest among these is the Jieyuan, or the “top escorted examinee (Dingming 2014).” This is then followed by Huiyuan the top ranked prequalifier, and Gongshi, the tribute scholar, who simply prequalified (Dingming, 2014).

The final degree level is that of “advanced scholar” or the Jinshi degree. This is conferred upon those who pass the triennial court exam, however whereas as many as two thousand candidates sat for the test each year only one to two percent were successful in gaining the degree (Fu, 1993). Graduates ranked first in class, or “distinguished” earn the title of Jinshi Jidi. The top three individuals who sat for the test each year earned this title (Hong Kong, 2007). These three individuals include the Zhuangyuan, or the top thesis author in the nation, the Bangyan, the second ranked tester overall, and the Tanhua, ranked third overall (Zheng, 2013).

This is followed by Junshi Chushen, or the graduates who are ranked second the court term. The names of those who were conferred with this honor were published publically on what came to be known as the golden billboard, and they were considered greatly honored, or high gentry (Hong Kong, 2007). Finally, the Tong Jinshi Chushen were ranked lowest, or third, among those that passed the Jinshi exam (Hong Kong, 2007).

In addition to the basic degree testing, occasional tests were hosted, which were deemed special purpose exams. These were announced by Zhiju, or a special imperial decree, and were generally directly related to a promotion for a particular position, a specifically needed skill, or an especially difficult assignment (Murck, 2000). These tests looked for individuals who had certain talents or who were more well suited to filling the position in question than others of the same degree level, or level of gentry (Murck, 2000). These tests were not only given for civil service like speech writers (Murck, 2000) but also for military related special assignments. The military degrees conferred on those who took these exams were the Wujunshi and the Wujuren, and afforded test takers the same liberties as the Jinshi and Juren (Zi, 1896), however they were not, generally considered as prestigious as their civil equivalents.

The Revolution and Reform of the Chinese Higher Education System

The Chinese exam-based education system, as described above however, was not to last. By the mid-1800's, the literati, or the educational culture, had determined that the system was flawed and did not fit with modern, or Westernized, thinking and the

emerging concept of globalism (Elman, 2009). Frustration with the flaws in the civil exam system, especially as it related to the changing national culture, ultimately led to the Taiping Rebellion. Hong Xiuquan, frustrated by his own inability to succeed under the civil service exam system and become a member of the gentry in the Confucian state, worked to establish a new Christian state and alter the examination system (Elman, 2009).

As a result of the changes in thought, and the need to modernize, traditional, and Confucian belief systems were replaced with the need for “modern science” as a leading principle. In 1905, the existing civil service exam system was done away with, and replaced with a more Western educational system (Bai et al, 2014). European and American education had followed an intellectual approach, and focused on a combination of intellectual thought and patriotism, which China hoped to mimic. Accomplishing this, truly, called for not only an alteration of the examination system, but a fundamental change in the political, social and cultural functions of the nations (Elman, 2009).

In order to support this change, and to modernize the children in the nation, the educational system actual began undergoing major reform in 1862 (Deng, 1997). These changes focused on eliminating the Confucian philosophy, and focused on China’s growing need to generate experts in foreign languages, modern technology, science, and other more globalized areas of interest (Deng, 1997). As a result, governmental schools were established to act as training institutes for language development, technical skills, and advanced military academies (Deng, 1997). At this point, however, not all traditional Chinese education was abandoned. More specifically, the Four Books and Five Classics

remained required texts for all students. In essence, these earliest reform attempts sought not to totally westernize education from top to bottom, but rather to teach pointed western skills, like gunnery, navigation, and the English language, without completely abandoning Confucian philosophy and what was considered a classic education (Deng, 1997).

By 1905, however, when the exams were fully abolished, it was clear that these minimal changes were not enough to support China's need to Westernize, modernize, and interact with the larger world. This was described by Sally Borthwick (1983) as follows: "The changeover to a new system of education at the end of the Ch'ing appeared on the surface to be a voluntary move by educational circles, but in reality what happened was that foreign relations and domestic pressures were everywhere running up against dead ends. Unless reforms were undertaken, China would have no basis for survival. Education simply happened to be caught up in a situation in which there was no choice" (Borthwick, 1983). In other words, the nation was fueled on the back of merchants, who recognized the benefit both to their personal businesses and to the nation, in learning modern western languages and business approaches, among other skills, in order to promote a more global, or conventional educational approach (Deng, 1997).

These changes were not truly maximized, or deemed absolutely essential until the Russo-Japanese war was fought on Chinese ground and the onslaught of non-natives demonstrated the true deficit that Chinese students faced in an international system. As a result, the court and provincial powers pushed for the nation to do away with the civil service approach completely, and begin civil education that was based on universalism

and a Westernized skill base (Bastic, 1988). To this end, the nation established its first board of education in December of 1905 (Gal & Zheng, 2013). The board was designed to establish, oversee and administer new schools that were changing to a modern education, versus a classic education. The board worked at the local and regional levels to increase the efficiency and effectiveness of the newly emerging educational model (Gal & Zheng, 2013). Unfortunately, because the existing testing system was fully abolished, there was a need for the new board of education to address the concern of how to measure, or test the effectiveness of the new instructional system, through written examinations.

This process of change, and of heavy debate over what changes were truly needed in the Chinese educational system, occurred during the years that continued from 1905 forward to the mid-1949. In short, while there was a need for educational reform and a desire to find balance between the modern needs of an industrialized and internationalized Chinese merchant class, the traditionalists retained a desire to maintain the education based on old-word texts leading to unrest in the country that made it difficult for management of the new educational system to be well executed (Pepper, 1990). Those who might have been able to create a steady, logical and meaningful system were divided by major political issues and consumed by civil war, bringing the significance of and focus on educational reform down to insignificance for more than 20 years (Pepper, 1990). The liberation of Chinese Communists in 1949, however, would finally bring about the structured changes that the country's educational system craved.

Policy Reform and Its Impact Post-1949

Half-way through the 20th century, the nation was liberated by the Chinese communist party, and truly began impacting education in the nation through structured reforms. More specifically, in October of 1949, the Chinese Communist Party, led by Mao Zedong, declared that the creation of the People's Republic of China, ending the civil war between existing parties, and stabilizing the nation (Tennent, 2009). And, while it suspended the nation's diplomatic relationship with the United States, it did not distract from the need to Westernize education in order to modernize and to consider the greater needs for a standard, method and technology based education (Nathan & Ross, 1997).

The new government had less concern for the Chinese tradition, focusing instead on technological needs, and updating the nation's educational offerings. As ties were severed with the U.S., and the new government followed communist traditions, the Soviet Union's educational system became the prototype to Chinese reform (Pepper, 1990). Unfortunately, the Soviet Union had little to no literacy deficit, and as such, their educational model did nothing to address this area of major concern in Chinese culture (Pepper, 1990). At the time that these reforms were being addressed, China's literacy rate had fallen to between 15 and 25 percent, and education had few curricular goals (Schugurensky, N.d.). As a result, Chairman Mao determined that the nation would have to implement its own system of educating, and as a result, launched multiple political movements and educational drives that would increase literacy for both male and female students nationwide (Kwong, 1988).

Chairmen Mao focused not only on children, but also on the development of adult education. Mao saw it as a major issue that “ninety percent of China’s population [had] never received an education, and among them, most [were] peasants (Zedong, N.d.)” Mao recognized that the lower classes had power and could become a dominating force in the nation’s reform. As a result, Mao launched night classes for illiterate adults in the working class, in an effort to educate the population and centralize government through an altered political state (Charkrabarti, 2012). Mao continued his work to alter the political and social standing of peasants in the nation and to alter the nation’s expectations for literacy and cultural education through 1976, though Chairmen Mao expanded those efforts in later years (Farquhar & Schoenhals, 2006).

For instance, in the 1950’s, under Mao, a great societal change was implemented in education. Mao worked to install political propaganda and nationalism, along with history and national education, in order to increase national patriotism, and to alter the role that patriotism had in education (Farquhar & Schoenhals, 2006). Unfortunately, Mao’s focus on education was largely lost during the later part of his time in power, because his split focus did not allow for it to remain a high priority (Farquhar & Schoenhals, 2006). In essence, in the 1960’s the Cultural Revolution began shifting the national focus toward training members of the Red Guard, and all Mao’s previous policies were lost, creating a great setback for literacy and technical knowledge (Farquhar & Schoenhals, 2006).

Following the Cultural Revolution and Mao’s fall, however, Deng Xiaoping elected to turn the nations focus back to education, and to regain the momentum that was

established in the early Mao-period, before the Cultural Revolution. Beginning in 1977, Xiaoping, Deng established the “Four Modernizations” as a guiding philosophy for education (Liberthal, 1995). They were originally researched and written by Zhou Enlai, and established four priorities for education in the nation, claiming that education should be focused to strengthen science and technology in the nation, provide a political education, support changing ideologies in rapidly altering fields including education, science, agriculture, and medicine, and to focus on moving the nation forward to meet the growing standards of the industrialized world (Lan Yu & Hoi, 2005).

Additionally, Xiaoping spoke out about the need to break away from the “rigidities” of Mao’s “dogma” and to push China to “catch up” with more advanced countries in the world. In 1985, he ceded responsibility for basic education to local developments, and further called for all children to attend a compulsory nine-year educational program ((Lan Yu & Hoi, 2005).). This directly followed his move to reinstate the National Higher Educational Entrance Exam, in 1977. It took a year, however for the Ministry of Education to organize a nationally uniform and well-structured test, which forms the basic cornerstone of the National College entrance exam system used today (Xinhua News, 1977).

Introduction of the National College Entrance Examination

National College entrance exams were not a new concept when they were reintroduced in late 1977. In fact, they were a reactivation of a policy that was previously applied in the early 1950’s without success (Qiong, 2012). At the time that

the national testing system for collegiate entrance was reactivated and reimagined, all citizens were allowed, and even encouraged to take the exam. There was no age limit, or educational requirement for test takers (Wei, 2008). The first year saw a burst of examinees, who had hoped to seek a greater education during the years of Cultural Revolution, which saw a decline in educability overall (Hays, 2012). As a result, test takers ranged in age from about 15 to 35 (Hays, 2012). Because a more appropriate and universal testing system could not be developed on such short notice, the 1977 test was locally developed and varied from individual province to individual province. An estimated 5.7 million citizens took that test, only 272,971 new students were admitted to the collegiate programs as a result (Hays, 2012).

As a consequence of the results of the 1977 test, a more stable system was established to ensure a more consistent testing process. The 1978 exam was created by the Ministry of Education and was hosted in July of that year (Zhang, 2011). The test was administered in sub-sections, including: mathematics, physical, chemistry, English, history and politics. Each test was administered on the same day, at the same time, and in the same sequence at testing centers in each Chinese Province (Fingar & Reed, 2006). The tests were then locally collected and graded. In addition to success on the written exam, applicants had to pass both a moral and a physical evaluation before being admitted (Fingar & Reed, 2006). This system stayed in existence through 1981 (Zhang, 2011). Increased protocols were put in place, however, to ensure only the most qualified applicants could take the exam. These protocols included an age limit of 25, and limiting the number of times an individual could take the test to two attempts (Fong, 2004).

Though the content and exact format of the practice has changed, this protocol is still in use as the basic qualifying factor for higher education.

The Importance and Purpose of The National College Entrance Exams

The primary purpose of the National College Entrance Examination was to create a system to qualify students for study at Chinese colleges and Universities. The exam, internationally considered a recruitment exam, is generally available to those who have graduated from secondary school and who are prepared to pursue tertiary education. Of all the Chinese educational examination processes, the College Entrance Exam is generally the largest and most influential of the designs. As such, passage of this examination is considered socially prestigious. Because it remains significant because it is the primary means by which colleges and universities accept academically eligible students. Traditionally, each provincial-level, or provincial unit, has a quota that represents the number of students, from that area, who are eligible to attend Universities (Communist Party of China, N.d.).

Students can list the university or college preferences prior to the exam or after the exam. While these preferences are given some consideration, they are not the only determining factor in where a student is assigned to (Hlavaka, 2009). The reality, for Chinese students, is that this exam serves as the only actual criteria for accessing tertiary education, both in China and abroad. These test scores, and educational preferences are not only relevant within the nation of China, but can also be used when applying for international study as well (Xinying & Wangshu, 2015). As such, poor performance on

the exam ends a student's dreams of pursuing higher education.

The Types of National College Entrance Exam Used Today

The subject and style of the tested subjects and resulting exam types have changed significantly over time, however today they are a relatively established system for tertiary matriculation. Generally, students take either an arts focused, or a science focused test, followed by a set of compulsory exams on more general subjects. Subject tests taken, and performance on those tests heavily affects educational and career paths in the years to come. These tests, however, vary from province to province. Common testing systems include: the 3+X system, the 3+2 system, the 4+x system, the 3+1+x system, the 3+2+x system, and the 3+x+2 system, each of which is unique in a number of ways.

The 3+x system. This system has been implemented throughout most of the nation at one point of time or another. The title refers to the tests format, which includes a test in each of three compulsory topics, Chinese, Mathematics, and English, and then at least one specific subject that the student has determined in a special area of interest (Guo & Xu, 2013). The first three sections of the test account for 150 points each of the total 750 points available. In other words, 450 points or 60% of the test is based on the first three compulsory sections of the exam. The X represents the remaining 300 points that are made up from social sciences, including politics history and geography, or natural sciences, including physics, chemistry and biology. Each of the sub-sections is worth 100 points, and gives information about specific talents or interests.

The 3+2 system is far less common, and more specific than the 3+x system. It tests over the three compulsory subjects of Chinese, math, and English, just like the previous system, but then selects two more limited topics for the remaining test areas. Those interested in art choose between politics, history, and geography, and students who want to focus on science and technology choose between biology, chemistry, and physics.

The 4+x system was used during the New Curriculum reform, specifically in the Guangdong province, and while it has now been abandoned, its basic structure is visible in the development of further testing protocols. The test is far more complete than the 3+ systems. It includes an X subject, selected according to the student's area of interest or desired expertise. Students could choose to test over one or two X areas, including politics, geography, history, biology, physics and Chemistry. Politics and geography, however, could not be tested together, nor could physics and biology. Chinese, and testing over at least one other foreign language, like English or French, were compulsory. Likewise, a mathematics section was compulsory, but was individualized for students interested in science, or students interested in arts. Finally, arts specific students had to take a comprehensive arts test, and science students had to take a compulsory science tests.

Similarly, **the 3+1+X system** focuses on a high number of more detailed or limited tests, and is still in use in the Shanghai province. The three refers to the three basic compulsory subjects already identified, including Chinese, Mathematics, and an approved foreign language, most commonly English. Each subject was scored on a 150

point scale. The “1” refers to a topic of interest, or a specialty area, selected by the student, and remains selected from politics, history, geography, physics, chemistry, and biology. This is also worth 150 points, and is used in planning and determining University education, but it is not included in the total score, used to determine the right to apply in technical or vocational schools. In essence, this part of the test only applies to those planning to earn a 4-year degree beyond their secondary education. This is because these subjects are not, generally, considered integral to success at the vocational level. X refers to comprehensive testing, or testing in either arts or sciences. Arts students also choose between a second subject test from the +1 categories, or a comprehensive arts exam. Similarly, science students have the option to either take a second subject from the science based +1 categories, or a comprehensive science exam. The number of questions related to the arts subjects is high than those in the science test (Guo & Xu, 2013).

The **3+2+X system** was implemented in the Jiangsu Province in 2003, and is still in use today. The three refers to the three compulsory subjects, again. Also similar to previous testing directives the +2 refers to taking tests in two of the six arts and sciences subtests. However, these subtests are not included in the full score, but their letter grade, sent on to the decision-making panels as a letter score. Finally, the X refers to the comprehensive science or arts test, which is the basis of academic admission (Guo & Xu, 2013).

The **3+X+1 system** is the standard curriculum testing system for all of China, and is used in the Shandong Province today. It tests over the standard three subjects, or

compulsory subjects, a test of the students choosing in either scientific or liberal arts, a basic proficiency test used to gauge the adaptability of all high school students (Li, 2012).

The Impact of the Chinese National College Entrance Exam

One of the primary reasons that the National College Entrance Exam is significant to this study is the impact that it has had both on the nation of China and a whole, and the way it has changed Chinese individuals, or collegiates. Perhaps one of the greatest impacts it has had is in the intense pressure students are placed under as a result.

Chinese students, in generally, feel a great pressure to excel on the test, and that pressure originates at the familial level. Children in China are very seldom seen or treated, as individuals. Instead they are seen as simply a member of a larger family unit, bound to fulfill their duties toward their parents, or to meet their parents expectations, until such a time as they may be considered an individual, generally after completing their tertiary education (Lin, 1995). Because of this social position, Chinese students often view high academic performance, and scoring well on the test, as a way to repay their parent for the financial expense, and other sacrifices their parents have made for their continued education. This has further been impacted, and even increased, by China's often embattled one-child policy. Because each family has only one child, they also have only one chance of using testing and education to raise their family's station or improve their situation (Lin, 1995).

Finally, students are heavily pressured by the school system itself. Because of the

nature of the school, the system has become naturally competitive. Students are praised, ranked, and ultimately demeaned according to their performance as they move through the system. More specifically, Chinese Youth and Children Research Center (CYRC) collected evidence that the average child spends 8.6 to 12 hours a day in school, and then several more hours studying (“Children in China too Busy for Play,” 2007). Education is thereby placed above everything else and becomes the only gateway to merit.

This increased pressure or stress has had several serious impacts on the nation’s youth. First, students are known to have a higher than average rate of stress-related illnesses. One survey, conducted by Xi’an Medical University considered the collective student bodies of 459 universities and secondary schools and found that a minimum of 7% of all high school students suffer from mental/emotional illness (Lin, 1995). This number, however, increased to 20% if insomnia, memory loss, loss of attention span or distractibility, mood changes, and general loss of interest in life, all of which are directly tied to the pressure derived from education (Lin, 1995). And there are similar proven to negative impacts on social development. A second study developed by the CYRC determined that 6 out of 10 children self-reported that they did not play with friends (“Children in China too Busy for Play,” 2007).

An even more disturbing evidence of this impact is demonstrated in the nation’s suicide rate for students. Approximately 387,000 Chinese students commit suicide each year, accounting for 25% of the world’s annual self-inflicted death, in the 15-35 age category (Yan, 2011). In China, suicide has become the leading cause of death in this

age group.

Another major consequence of the pressures from the current educational system, and the need to perform well on the tests, is the increased the number of students who cheat in order to meet their family's or societal expectations. Cheating methods take the form of digital devices built into pencils, pencil erasers, and other methods include clothing items that display answers, or paying look-alikes who specialize in testing to take the test for them (Wong, 2012). Another, perhaps less traditional form of advantage seeking, has involved taking medication during the tests to peak performance. Generally, as many as 400 out of every 1300 seniors use injections or IV drugs in order to enhance performance on the test (Tao et al, 2012). Still others have used oxygen masks during the test (China GaoKao, 2012) and some girls going on hormonal treatments to interrupt their menstrual cycle in order to avoid the interruption of needing to go to the restroom more frequently during the test. Many students rely on the wares of apothecaries, or traditional Chinese medicine markets, set up outside the testing center, in order to increase their concentration and manage their nerves during the testing process (The Economist, 2012). These practices, while not specifically tied to any increased health risk, are not medicinally sound, and underscore the level of pressure students experience as a result of the testing. The overall medical risk during the exam is so high, in fact, that paramedics are routinely kept on hand to treat students who suffer medical complications as a result of testing. Beijing Emergency Medical Center's doctor Xin, told China Daily "Some students may faint in the classroom, we have prepared medical services accordingly (China GaoKao, 2012)."

Another important aspect of life in China that has been impacted by the testing is economic productivity and entrepreneurialism. The National College Entrance Exam system forces children to rely predominately on rote memory. As a result, Children are losing the ability to think creatively, or apply critical thinking and problem solving. This has led to a decrease number of patents by Chinese citizens (Zhao, 2012). For example, in 2008 alone, China introduced roughly 473 patents for new or markedly improved products, while The United States, with a smaller population, introduced 14,399 patents, and Japan introduced 13,466 patents (Zhao, 2012). What's more, only .003% of all Chinese owned companies hold their own unique intellectual property rights (Zhao, 2012), resulting in a Chinese economy that is increasingly labor dependent, rather than innovative and inventive.

This labor intense, or labor dependent economic system ultimately seriously damages the economy because it drive the price of labor down (Wong, 2012). In order to be competitive on the international labor market, or secure contracts with overseas investors looking to secure labor contracts at a limited cost, the nation must continually offer cheaper wages or production prices. In recent years, however, this has become increasingly difficult, as labor contracts are lost to nations like Vietnam, Cambodia, and Bangladesh (Wong, 2012). In the context of a global economy, the reality is that China cannot maintain a high quality of life for laborers, and undercut these nation's labor prices.

The Inequity of Higher Education as Impacted by Testing

In addition to the other consequences previously examined, the higher education and exam-based system provides unequal opportunities based on geographic area, resulting in geographical discrimination in Chinese higher educational settings. In short, the admission protocols, including the admission quota, scores, and other details, result in a restricted opportunity for students from within the Henan province.

The standard protocol for admission is that each university has a fixed number of students who they can admit from each province, with the highest percentage of students coming from their own province. As a result, areas of the nation with a greater number of universities, or with higher quality universities with a greater number of students, have greater opportunities for local applicants than those who are in outlying areas, with fewer local options for tertiary education resulting in admission bias. For example, “students from Beijing, though fewer in number, are accepted to Chinese top tier universities at much higher rates than those from other provinces (Fu, 203).”

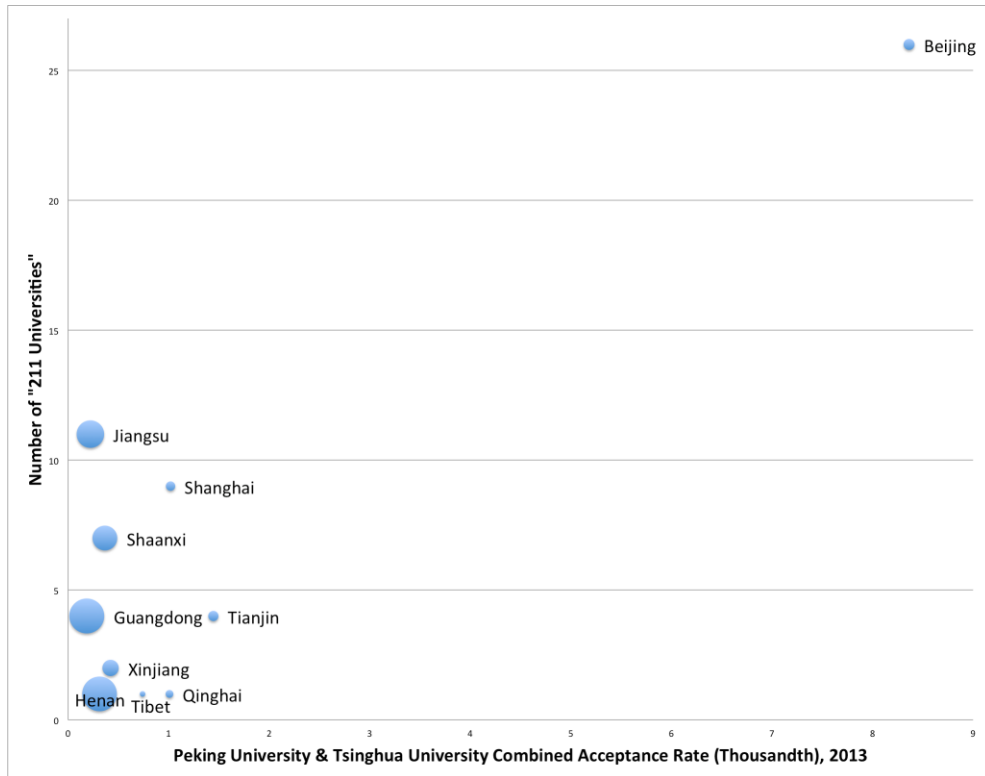


Figure 2: Disparity in University placement between provinces. Data via Sina, T. of Peking University (Fu, 2013).

In essence, because of the ongoing inequality of admissions standards, those students in small provinces, Henan being the example that will be further examined, must have higher admission scores, and greater personal financial resources in order to reach the same educational goals.

Chapter 2

Introduction to the Henan Province

Henan is a province located in the center north of the People's Republic of China, which is the 6th most dense sector of the nation. Henan is reliant on natural resources that are rapidly dwindling leaving it extremely limited in financial capital. The province named for its location, is in the center of the country along the yellow river with roughly 25% of its total territory lying above the river and the remaining lying below the river (Henan Foreign Labour Service Cooperation Corporation, 2012). The province occupies total area of 167,000 square kilometers and is a fertile and dense plain (Henan Foreign Labour Service Cooperation Corporation, 2012). Henan's population of 94,100,000 ranks it as the 3rd most populated province in the nation (National Bureau of Statistics, 2013). It has 17 prefectures, 159 counties, and 2455 townships, with a per capita product of Chinese Yuan (CNY) 37,130. This makes it the 5th largest provincial economy in Chinese, and the largest single inland province (Guo, Hao, & Guo, 2015).

Unfortunately, despite being one of the largest and most profitable economies the province is struggling financially. Its largest economic resources were its large aluminum and coal reserves. These reserves dwindled, however, leaving the area increasingly dependent on agriculture, heavy industry, retail, and tourism income, which presently are largely underdeveloped (Guo, Hao, & Guo, 2015).

Introduction of Project “985” and “211”

Project 211 is the Chinese government's new endeavor aimed at strengthening about 100 institutions of higher education and key disciplinary areas as a national priority for the 21st century (Li, 2004). Project “985” and “211” Key Universities and Colleges stand for the best or Chinese top tier universities and colleges as well as the U.S. news national ranking colleges and universities, simply described as Chinese national ranking colleges and universities.

The implementation of Project 211 is an important measure taken by the Chinese government in its effort to facilitate the development of higher education in the context of the country's advancement in social and economic fields. Primarily aiming at training high-level professional workforce to implement the national strategy for social and economic development. The project has great significance in improving higher education, accelerating the national economic progress, pushing forward the development of science, technology and culture, enhancing China’s overall capacity and international competitiveness, and laying the foundation of training high- level professional manpower mainly within the educational institutions at home (Li, 2004).

During the 9th Five - Year Plan period, the government will initiate actions to strengthen a number of institutions of higher learning and key disciplinary areas. It is envisioned that after efforts over several years some 100 institutions of higher learning and a group of key disciplinary areas will have greatly improved their quality of education, scientific research, management and institutional efficiency (Huang, 2005). In addition, these institutions will also have made remarkable progress in reforming the management system and consequently become the bases for training a high-level

professional workforce whose members can solve major problems for the country's economic construction and social development. As a result of such efforts, this group of institutions will set up national standards for overall quality, with some of the key universities and disciplinary areas approaching or reaching the advanced international standards. The majority of them will have enhanced their physical conditions and staff competence, in addition to noticeable achievements in human resources training and scientific research. Adapting to regional and sectional development needs, these institutions are expected to play a key and exemplary role (Li, 2004).

Project 985 is a constructive project for founding world-class universities in the 21st century conducted by the government of the People's Republic of China (Zhang, 2008). On May 4, 1998, President Jiang Zemin declared that China must have a number of first-rate universities of international advanced level, so Project 985 was launched (Zhang, 2008). In the initial phase, 9 universities were included in the project. The second phase, launched in 2004, expanded the program until it has now reached almost 40 universities.

List of Universities in Project 985 (Total: 39):

Beijing Institute of Technology, Beijing Normal University, Beihang University (formerly Beijing University of Aeronautics and Astronautics), Central South University, Central University for Nationalities, China Agricultural University, Chongqing University, Dalian University of Technology, Fudan University, Harbin Institute of Technology, Huazhong University of Science and Technology, Hunan University, Jilin University, Lanzhou University, Nanjing University, Nankai University, National University of Defense Technology, Northeastern

University, Northwest University, Northwestern Polytechnical University, Ocean University of China, Peking University, Renmin University of China, Shandong University, Shanghai Jiaotong University, Sichuan University, South China University of Technology, Southeast University, Sun Yat-sen University, Tianjin University, Tongji University, Tsinghua University, University of Electronic Science and Technology of China, University of Science and Technology of China, Wuhan University, Xiamen University, Xian Jiaotong University, Zhejiang University, East China Normal University (MOE, 2012).

Lack of Educational resources, equity, and social justice in Henan Province

A total of 772,000 Henan students took the National College Entrance Exam in 2015 and an average of around this number of Henan students take the examination each year. These students, however, they are 27 times less likely than student's from Beijing to attend a "211" University (Guo, Hao, & Guo, 2015). This is due, in part, to the fact that there is only one such university in their home province (Guo, Hao, & Guo, 2015). As a result, many students ultimately have to go to lower level institutions with Key universities' admission score.

There are six levels of notation or collegiate types open: national direct, national other administered, National Key Universities, Provincial, Municipal, and Private Universities. The only "211" University in Henan province is Zhengzhou University, there is not an "985" college or university in Henan province, though there are a number of smaller private colleges in the region resulting in a number of educational limitations (Na, 2011). In other words, there is only one Chinese national ranking college or

university in Henan province to serve such a large population.

More specifically, when compared to Beijing, Henan has one of the lowest numbers of universities and university spaces per capita, and has a significantly lower admission quota. As a result, a candidate from Beijing does not have to score nearly as high a candidate from Henan in order to be qualified for tertiary study (Boni & Walker, 2013). More specifically, Peking and Tsinghua University, both located in Beijing, accepted 286 and 270 students respectively in 2009. In the same year, however, universities in the Henan province accepted only 1/5 as many students to programs of study despite the fact that Henan province has a population that is six times larger than Beijing's. Therein lies the discrimination (Boni & Walker, 2013). Furthermore, in 2010, the acceptance rates for students who were residents of Beijing, Shanghai, Shandong and Henan, respectively, who applied to Chinese top-ranked universities were 20.1%, 18%, 7.1% and 3.5% (Liu & Shen, 2014).

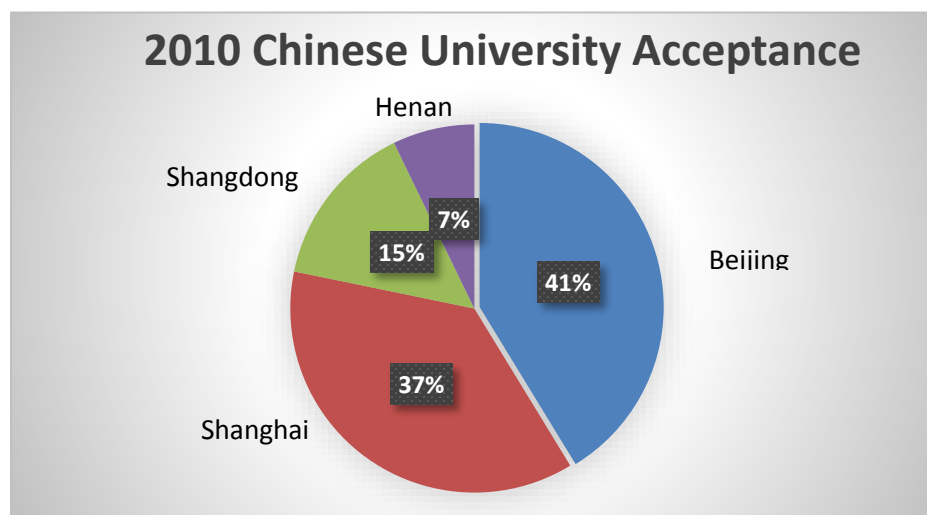


Figure 3: Acceptance rates by Province, data collected from (Liu & Shen, 2014).

A further area of inequity is educational financial support. A large percentage of university budgetary support is derived from the central government, rather than the local budget. As a result, rural or underdeveloped areas receive less funding than those that are in more central areas. Students in areas like Henan suffer limited subsidy support and educational resources, which affects the overall availability of high-quality educational opportunities (Mendes & Srighanthan, 2009). This ongoing inequity has led to open advocacy for changes in policy and protests for testing and educational reform (Buckley, 2015). In 2015, the issue was raised before the National People's Congress, however, to date no significant changes have been made (Buckley, 2015).

Theoretical framework

When considering the relationship that exists between the National College Entrance Exam, higher education opportunities, and the apparent disparity in treatment between geographical regions it is essential to work to understand equitable relationships within that system. To that end, the Equity Theory of Higher Education can be readily applied. This is one of the most rigorously developed, but theoretically complex frameworks that has been used to explain the relationship of the individual as she relates to social change and social exchange, especially in the field of education (Cosier & Dalton, 1983).

This model, at its basic level, was developed by John Stacey Adams in 1965 to explain how equity works as an ongoing system of inputs and outputs, within the social sphere (Cosier & Dalton, 1983). Adams described it as a relation to the system by which

inputs become the factors of accomplishment, for example personal experiences, educational experiences, and work ethic, which are put into the social exchange, and which have value on which a return can be expected (Adams, 1965). Likewise, by Adams standard, the outputs are then the returns that a person receives on his investment, or the benefits that he reaps for having put in hard work, pursuing education, and investing past experiences into his social whole (Adams, 1965).

As an example, if an individual is a member of an organization for several years, and acts as a chief officer in that organization, working to both improve its reputation and make its charitable events a success, the work of the individual puts into that organization is its input, in terms of social exchange. The output, however, would be in the way his association with the organization improved the opinion other people had of him that gave him a sense of social elitism, and improve his individual employment resume. In essence, no work, good or bad, is deemed to go unrewarded, or without output, in this system, because it results in social exchanges that have meaningful impact on life (Adams, 1965).

When using the equity theory to understand equity in higher education, especially as it relates directly to our case regarding the inequity of the Chinese National College Entrance Exam system in the particular context of Henan province, it is important to understand that equity in the philosophical aspect denotes that the way treating human beings is either fair or unfair. That is to say it is either equitable, giving everyone the same treatment, or inequitable, treating some better than, or lesser than, others (Adams, 1965). Adams created a mathematical equation for defining and determining the ratio

between inputs and outputs, as it relates to equity or inequity in the educational setting. He showed that it could be proven that inequity exists for a person, identified by the variable p , whenever the perceived or understood outcomes, o , as a ratio against inputs, i , is inequitable when compared to another person's similar ratio (Adams, 1965, p.280).

This yields the equation: $P=i/o$.

Returning to the illustrative example previously provided, the use of this equation can be more clearly understood. The person, p , believes that the existing relationship between the work the individual has put into the charitable organization over the last several years, or the individual's input i and output, o , the individual's perception of how the individual is treated by others as a result is less than other members of the same committee. In other words, others have received superior social collateral, or compensation, for their efforts with the same organization. This means that the individual perceives treatment to be inequitable (Adams, 1965). If, however, he perceives that the ratios are equal or that individual is receiving the same social collateral, or respect and status, from individual efforts as others on the committee, then the relationship is equitable (Adams, 1965).

Adams (1965) further proposed four postulates for how inequality develops in social relationships, like education. First, inequality occurs within the individual as the result of perceived unequal treatment. Second, inequity occurs in direct proportion with the tension in a given situation; thirdly, he argued that inequity motivates individuals to make decisions that will reduce the tension, thereby reducing the perceived inequality. And finally, the power or strength of an individual's motivation to reduce inequity is

equal to the strength or severity of the perceived inequity (Adams, 1965).

The mathematical soundness of these arguments were studied, and tested in several follow-up experiments, and shown to be valid. Wicker and Bushweiler (1970) and Carrell and Dittrich (1978) are perhaps two of the most notable teams to focus on the subject and to prove that people, generally, have the ability to maximize their social equity when they are in situations in which have equal inputs and outputs, of for whom the equality ratio is balanced.

Certain downfalls, or complications in this simplistic design have also been raised during follow-up studies. At least three studies cohesively determined that individuals would cognitively distort inputs, in order to establish a sense of balance for themselves. In other words, people are naturally inclined to cognitively distort the facts of a situation in order to feel that it is equitable, even when it is not (Leventhal, Allen, & Kemelgor, 1969; Carrell & Dittrich, 1978). Studies have likewise demonstrate that there is no standard threshold for pain tolerance or discomfort, which is to say that different people have higher, or lower, tolerance for the existence of inequality (Tornow, 1971). Those with a higher tolerance are thereby less likely to take action that reduces the inequality, and which lowers the discomfort level for the individual. Therefore, the unethical in these cases may be allowed to take control, or continue as a direct result of inaction (Tornow, 1971; Brass Butterfield & Skaggs 1998). When unethical persons are allowed to run a system that creates negative consequences and inequitable outcomes, and then the inequity is in essence, allowed to thrive and grow (Rest, 1986). This could be described as exactly the situation that is currently affecting the educational outcomes in

China.

Currently, the educational situation in the Henan province demonstrates an excellent example of this kind of inequity. Despite hard work, it is factually more difficult for students from Henan to get into Chinese top tier colleges or universities than it is for someone from Beijing, or Shanghai.

Consider the issue as an equation. $P=i/o$. In China a student from Henan (P) inputs primary and secondary education, study hours, and expands effort, and obtain an overall test score, and output's college placement. For the situation to be considered equitable with regard to education according to Adams (1965) standards, the output for a student in Henan and a student in Beijing would have to be equitable access to tertiary education based on similar inputs on all other factors. Based on the evidence previously presented, however, it clearly is not.

This can be clearly demonstrated through application of the argument theory as it directly relates to the equity equation. Argumentation theory has been developed and applied to a number of fields as it relates to trying to create sound arguments for social observations, or social phenomenon (Driver, Newton, & Osborne, 2000). According to Toulmin (1958), who outlined the argumentation model in *The Uses of Argument*, the elements of sound argumentation must include: data, claim, warrants, and backing for each argument. Data can be defined as the known facts that can be collected in support of a specific claim (Driver et al., 2000). The claim, then is what an argument is intended to defend or prove it is the meritorious conclusion that can be established by data analysis (Driver et al., 2000). Finally, the argumentation's warrants are the reasons that a

claim can be justified, based on the relationship established between the data presented and the claim made (Driver et al., 2000). Backing, thus, are the assumptions that can be based on the rationalization of the warrants, within a given argument (Driver et al., 2000).

This four point structure, as a model for argumentation, yields the following basic formula: because the following data has been proven, and since (the warrant) can be assumed true on account of (the backing) these reasonable assumptions, the following claim or conclusion can be made (Driver et al., 2000). Not all arguments will follow this format exactly, because any argument that can be deemed relevant, sufficient, and acceptable, and that contains the basis premises of a sound argument, is acceptable regardless of precise form (Blair & Johnson, 1987). Argumentation theory can then be used to demonstrate the existing inequality in the National College Entrance Exam's fundamental implementation in China.

Inequity in the Current National College Entrance Exam's Implementation

The inequity in the current educational system in China is of serious concern, in part because it is failing to identify the most talented, and most deserving of students by giving preference to individuals in certain provinces while ignoring others. The ripple effect that this system has had on education, economy, and even corporate productivity in the nation, as previously demonstrated, is potentially devastating. Its ability to derail the nation as a whole, in terms of economy, cannot be ignored. In fact, it has been publically acknowledge by China's government as an area in need of reform. The

National Medium and Long-term Educational Reformation and Development Outline was formally accepted on July 29, 2010, and set goals for the Chinese educational system to accomplish between that date and 2020. These included a sincere focus on altering policy and standardized testing procedures, specifically with regard to the use of the National College Entrance Exam. The standards acknowledged that there is a need to reform the examination system, and improve the academic qualities of graduates' in order to place less focus on rote memorization and greater focus on entrepreneurialism and global employability (Zhu & Jinhua, 2005). What's more, this governmental action announced a special focus on creating a greater level of "fairness" in education and a need to reconsider the formulation of medium and long-term educational development, including the improvement of educational opportunities for the common classes (Zhu & Jinhua, 2005).

Perceived Equality in Current Higher Education

For China to provide "fair" or "equitable" education, every student in the nation would have to have equal rights to pursue, and opportunities to receive, a high quality education. This means that according to Adams (1965) every student (p), given their own input (i), should be able to access the same college or university opportunities (o). Any distinctive or discriminatory treatment must be regarded as providing unequal educational opportunities, or outcomes. According to both Confucius, who is integral in Chinese educational theory, and modern educational best practices, there should be an intent to make "no social distinctions in teaching (Yan & Zhong, 2003). This means that

boundaries cannot be placed on education based on social status, personal identity, nationality, gender, age, race, creed, region, location, or basic access to opportunity. This is further reflected in the socialist premise of education, which according to Marx, is “an association wherein the free development of each is the condition of the free development of all,” or “an economic order of society which together with the greatest possible development of social productive power secures the highest possible harmonious development of human beings (via Ryan, 2000).” Thus, according to the Chinese characterization of socialism, and thus socialist education, there should be a guiding ideology that education is designed to develop all persons equally, and to their fullest potential. Unfortunately, despite these high ideals, Chinese higher education has been developed in such a way that a variety of inequalities and educational restraints are inherent in the system.

Unfairness as it relates to the physical distribution of resources

Currently, Chinese higher education is largely managed at the local level (Murray & Elsevier, 2014). Higher education funds are provided by the national government, but given directly to local governments for management and distribution. As a result, local higher education is in essence directly tied financially to local economic development and success (Murray & Elsevier, 2014). Consequently, there is a major deficit in some regions, as it relates to educational opportunity. This disparity between federal and local spending is visible in the following figure:

China: Expenditure by central and local governments in 2012 (RMB bn)

Expenditure	Central	Local
General Public Service (GP)	133.0	1,170.2
Diplomacy	33.2	0.1
National Defense	650.6	21.1
Public Security	188.0	592.8
Education	378.2	2,014.1
Science and Technology	229.1	224.2
Culture, Physical Education and Media	49.5	207.5
Social Security and Employment	575.4	1,200.0
Medical and Health Care	204.8	717.1
Environment Protection	199.8	290.0
Others	1,836.4	4,281.8
Total	4,478.1	10,718.8

Sources: CEIC, HTI

Figure 4: Chinese expenditures by central and local government (Source: Peterson Institute for International Economics, 2013)

The reality is that urban and rural areas of China do not exist in the same financial footing. Areas like Beijing, for instance, have a more active trade center and gross domestic product (GDP) also have greater educational opportunities than struggling areas like Henan (Guo, 2012).

Generally speaking, the eastern regions have greater financial assets, and a more developed high-education system than western, less developed areas of China. The disparity in spending, per province, as compared to the gross national product can be clearly demonstrated in the following figure:

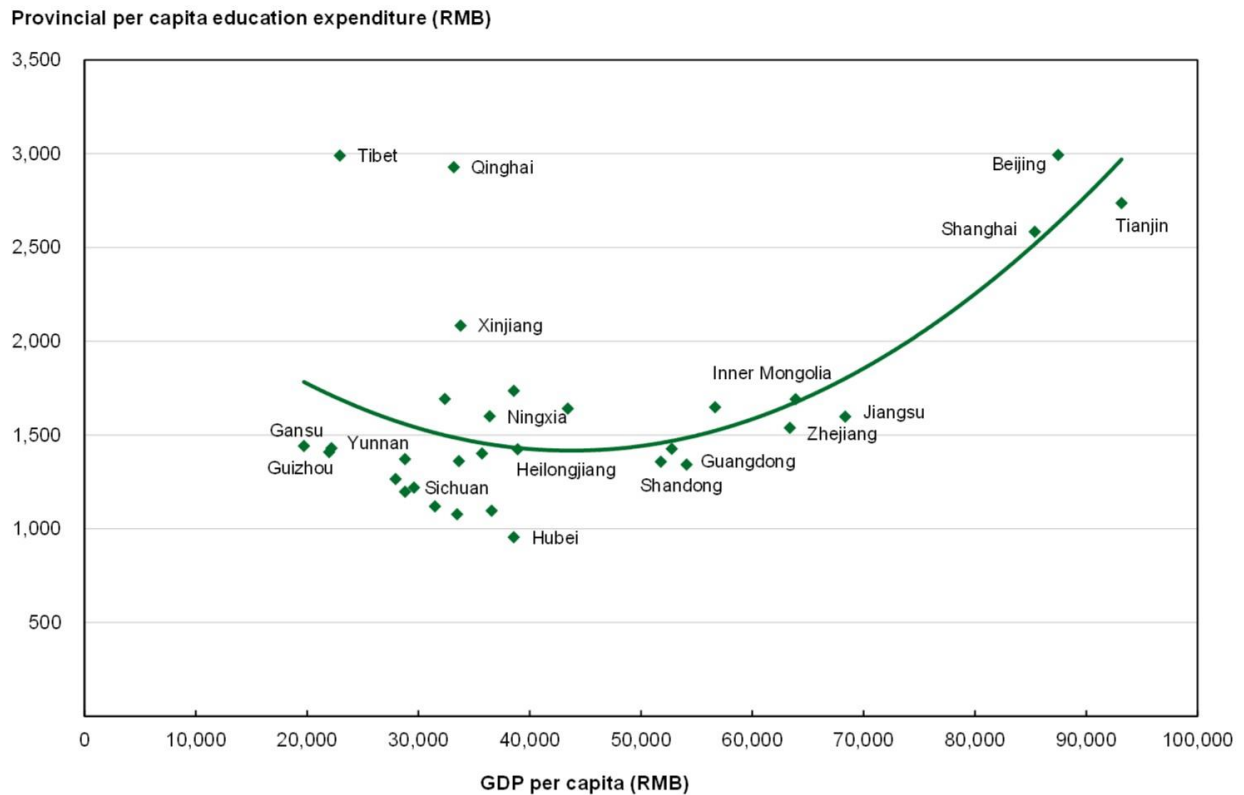


Figure 5: Expenditure on Education Per Capita (Source: UNICEF, 2014)

This is then further demonstrated in the increased stipends per student, the number of graduates that successfully complete tertiary education from these regions, and the number of colleges that are established within the eastern regions (Altbach, 2009). In fact, the line plotted in the by province, and their per capita spending on educational needs demonstrates, beyond the shadow of a doubt, that the eastern provinces have a more well-funded education than western provinces, through the relationship is not entirely linear (UNICEF, 2014).

While this inequality may have initially developed from natural regional limitations, like urbanization, the desire to provide more funds and attract more

university graduates at top-level colleges in certain regions and the way in which allocation of higher education funds has been developed at the national level, has exacerbated the larger issue (UNESCO, 2014). This can be demonstrated in the “211” and “985” schools projects. These projects were designed to fund National Key Universities, with the specific intent to raise research standards of high-level universities and cultivate opportunities for the socio-economic development of the nation through education. It is estimated that during the first phase of the project, alone, between the years of 1996 and 2000, approximately US\$2.2 billion were distributed for educational development (Li-Hua, 2014). Despite this massive spending, however, the key universities that were developed are mainly distributed in the eastern provinces, allowing little opportunity for development of western regions through higher-education and key universities, despite their specific goals to provide greater opportunities for development nationwide.

As a result, extremely popular and financially successful areas like Beijing and Shanghai have afforded local students access to educational opportunities that are significantly higher than those in more rural provinces in terms of both quality and quantity. Ultimately, this trackable imbalance in distribution of higher education opportunities, and the resulting level of inequity for students, especially those who originate from different areas of China, can be described, and has been determined by some researchers to be one of the largest factors in what individuals do, and what individuals do not access higher education in China (Zhu & Wang, 2005).

Inequities in admission policies

One major area of disparity is in admission rates and practices. Generally, every University or college sends a team to every province in order to recruit a set number of students for study in an academic year. Generally, the greatest number of spaces within a University are reserved for students from within the given province, with fewer applicants being accepted from outlying areas. This is problematic, however, because Beijing and Shanghai have lower populations of native students, but higher numbers of key Universities, ultimately allowing in a greater number of poorer performing students to enroll from those areas, while allowing a smaller number of higher performing students from outlying and more populated regions to seek tertiary education. To demonstrate this further, consider the number of high schools in each province, as demonstrated in Figure 6.

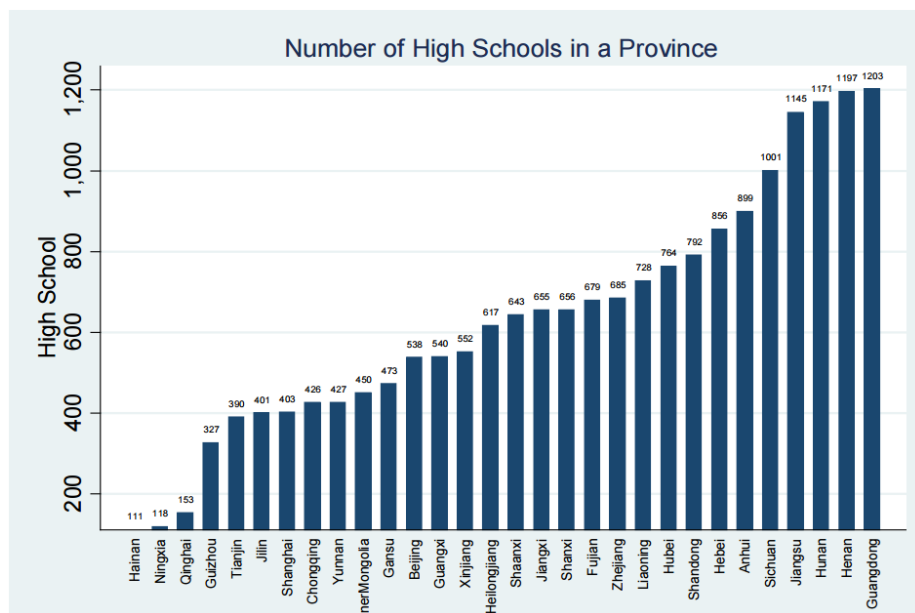


Figure 6: Number of High Schools in a Province (Source: China Data Center of Tsinghua University, 2015).

This clearly demonstrates that the number of and enrollment in colleges in Henan province is one of the three largest in the nation, and Shanghai and Beijing are both considerably smaller, and yet, it is known that tertiary opportunities are more dominant in Beijing and China, while there is only one Key University or Chinese top tier college or university in the Henan Province (China Data Center of Tsinghua University, 2015).

This disparity is also seen in the overall greater performance of students in rural areas of the nation, who, despite their elevated performance, are least likely to attend Key Universities. Rural students, perform on average 10% above their Urban peers, as demonstrated by figure 7. This would mean, were the equality ratio followed, mean that roughly 10% more rural students were attending Top Universities, when compared with their urban peers.

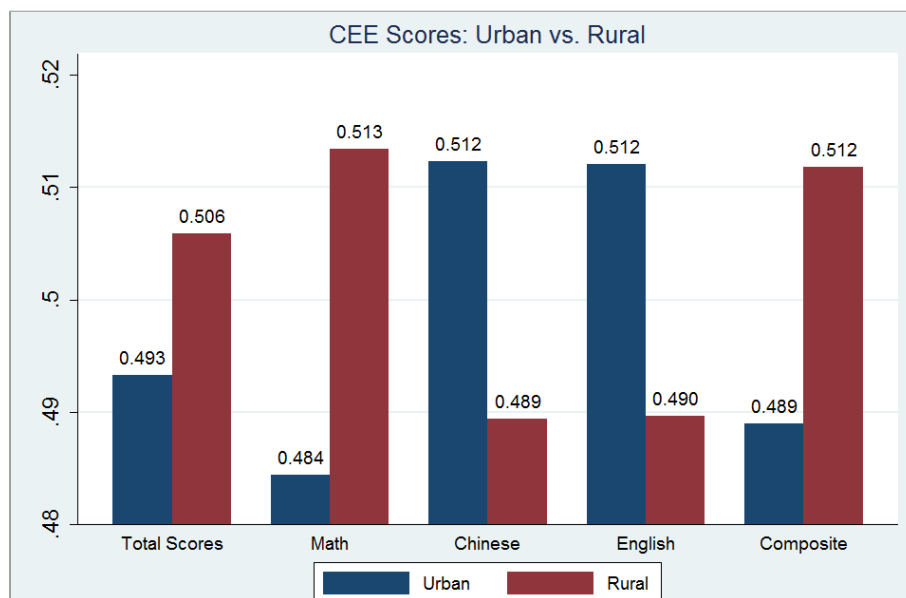


Figure 7: CEE Scores in Urban VS Rural populations (Source: China Data Center of Tsinghua University, 2015).

The reality, however, is that less than 20% of the total students attending Top 2 Universities come from the rural demographic, as demonstrated in Figure 9. In contrast, over 50% of those attending Colleges of little or no reputation are from rural areas, demonstrating that for most of those from rural provinces a high-ranking tertiary education is simply not a reality (China Data Center of Tsinghua University, 2015).

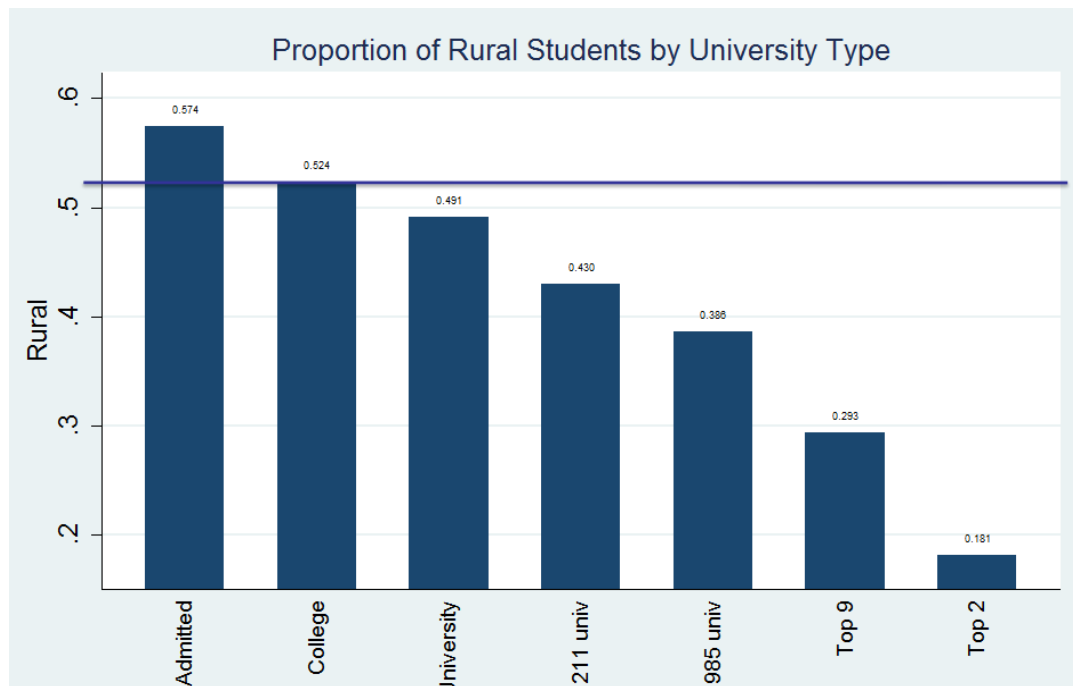


Figure 8: Rural University Enrollment by Type (Source: China Data Center of Tsinghua University, 2015)

The Consequences of Inequity

There are a number of negative consequences. Adams (1965) terms, negative social equities, that occur when people believe they have been treated inequitably. These

may include filing lawsuits, seeking political action, and launching attacks against those they believe have been given the unfair advantage (Sanchez, 1997; Miller, 2010). In the case of college performance, however, more common consequences for students include: complaints, departure from study, absenteeism, and poor performance (Mobley, Griffeth, Hand, & Meglino, 1979; Cosier & Dalton, 1983; Dalton & Todor, 1982; Steers & Rhodes, 1978; Muchinsky, 1977; Locke, 1976; Muchinsky & Tuttle, 1979; Porter & Steers, 1973). Given how great an issue inequity has become for the Chinese educational system, it is both logical and important for those working within the university system, and perhaps even more importantly for those working in the testing and application system, to begin making changes to increase equitable treatment of all potential students, in accordance with the changing desires, or goals of the Chinese long-term goals for education (Carrell & Dittrich, 1978).

Still some questions may remain about why it is important to alter the perceived inequity. It is essential to know how equity impacts both students, individually, and society as a greater whole. As previously demonstrated, students who believe that they have input into their education, and ultimately their tertiary educational opportunities, but that output is not equal for all students, or all persons who engage in the National College Entrance Exam Testing. As a result, when students begin to believe that this equation is unequal, their work, or effort put into input, will also loose resolve. As a result, the nation as a whole has lost mental agility, problem solving and conviction in the power of individual thought. This is the typical, or shared, experience when it comes to perceived inequality, and is thus to be expected (Homans, 1961; Patchen, 1961).

Similarly, a number of studies have shown that drop out rates, or the number of students who electively leave or scholastically fail out of schools rises as the perception of inequality increases (Carrell & Dittrich, 1976; Telly, French, & Scott, 1971). In China specifically, it has led to an increasing number of students departing the Chinese nation to study abroad, resulting in as much as a 11% increase in 2014 alone, with half a million students electing to study at foreign universities rather than continuing to engage in the inequitable system (ICEF, 2015).

Attending a U.S. institution of higher learning is a costly venture for Chinese families. More than 60% of whom privately fund students' costs (Emmeline, 2013). Students who are not receiving the education that they need to live up to their potential, or who are forced to focus on the rote memorization needed for the test, or who experience the inequity created by the system, cannot ultimately cannot reach their full potential in the workplace either. This damages the overall potential of education at the universities as well, because their classrooms are no longer infused with the creativity and latent talent of highly qualified students due to the limitations caused by program inequity, ultimately removing those same minds and skills from the Chinese economy as well. In essence, as the direct result of the inequality, individuals become disengaged, and disinterested in solving the inequality and so let an unbalanced system destroy the potential of devising a better, more equitability system, and its potential benefits (Adams, 1965; Cosier & Dalton, 1983; Carrel & Dittrich, 1978).

A loss of self-efficacy and a tendency to give up hope, is another common outcomes for those suffering from of the perceived inequality (Nesbit & Burton, 2006). In the case of China and specifically to Henan province, either students minimize their

efforts because they see them as futile, or they maximize their efforts, in order to ultimately escape the perceived inequity by seeking non-native educational options (Cosier & Dalton, 1983; ICEF, 2015).

Another clearly damaging effect of students trying to increase their input, in order to increase their output in the face of inequitable reward for effort is the damage that is done to the student's mental and physical well-being. As previously demonstrated, the National College Entrance Exam (NCEE) and University Application and Acceptance program in China is extremely high stakes, resulting in both mental stress and often substance abuse, suicide, and a variety of other serious mental and physical side effects. These tests would, no doubt, be considered high-stakes and stressful, as a result of factors like parental expectations, the history of imperial testing, and the Chinese one-child policy even without the added issue of inequity in the system. It is extreme inequities, however, that create an added source of frustration and stress that students can possibly hope to, but are routinely expected to overcome. Given the known impact that these conditions have on the health of students, it is clear that the stress related to the current system inhibits their ability to perform effectively, or learn and demonstrate learning at their best, ultimately further degrading the total value of the education they are provided (Williams & Colomb, 2003).

Returning back to the "argumentation theory" that serves as part of the theoretical framework for this investigation, an argumentation can be clearly made for inequity in the current system, and its damaging effects on students, the educational system, and the Chinese economic culture as a whole (Levy & Ellis, 2006; Williams & Colomb, 2003).

This argument must be built on an understanding of the framework for dealing with inequity issues, or the mathematical balance which is derived from the formula $P = i/o$ (Adams, 1965; Carrel & Dittrich, 1978; Cosier & Dalton, 1983; Nesbit & Burton, 2006).

Thus the problem facing China today, as outlined by the four pillars of the argumentation theory, can be stated this way: because it has been proven that rural student's like those in the Henan province score higher on the NCEE on average, and have a greater number of secondary schools, with higher total enrollment, than the schools of Beijing and Shanghai, but have a lower number of total University slots available to Henan students, and since as a result, it can be assumed that a higher test score is needed for residents of Henan to enter a top level University in China than it is for a resident of Beijing, which can be proven true on account of known enrollment and acceptance statistics, it is reasonable to claim that not all students in China have equal opportunity and open access to tertiary education based on a merit system, and thus the system needs revised to create greater citizen equality for testing and tertiary educational admission (Driver et al., 2000).

Considering the next step

At least one leader from the Chinese governmental and educational sector has very verbally and very publically come out in support of major reform of the current system. Xuemi Wang (2007) has addressed that "Our current college entrance examination system with the form of equity makes everyone equal before mark, however, which also leads to some unfair phenomena" (Wang 2007). It is clear that

reform of the current national college entrance exam system is essential to creating equality, and ensuring efficacy of the tertiary education entrance examination system, which has created the kind of inequalities described above.

First and foremost, it is key that the test itself be altered, so that it adheres to a single form, rather than taking multiple forms in multiple provinces. This will ensure that all students' scores are truly standardized and can thus be considered both fair and equal across all provinces. Further the test needs altered to decrease the rote memorization elements and increase the overall problem solving and critical thinking required on the test. Currently, its focus on book knowledge decreases the comprehensiveness of the test, and cognitive skills required to perform well on the test has, as previously demonstrated had devastating effects on the nation's entrepreneurial spirit. As such, students need to be tested in a way that encourages greater critical thinking, problem solving and creativity in order to move the nation, as a whole, in the desired direction both educationally and economically.

It has also been suggested that the number and type of tests need to be more diversified, so that different collegiate levels could look for different skills, and use more appropriate examination styles. For example, technical schools would use a different testing procedure than Key Universities. Key Universities likely need additional testing areas, or more complex testing, while vocational college could implement provincial testing over more basic skills, in order to qualify a different caliber of students, or students with a different kind of skill and level of interest than those who are Key University bound.

Provinces or colleges could also move to have certain tests or subtests performed more than once in a year to increase testing and approval for application. Ultimately this might mean that, “through the diversification of examination, we can give more students more opportunities to be educated, striving for greater fairness of higher education” (Gao, 2009).

By contrast, should the changes that need made be continually ignored, it will ultimately result in an increased number of students who slip through the cracks of an ineffective and inefficient system, a decreased number of new enterprises, patents, and creative business ideas coming out of the nation of China, and an increased and ongoing dependency on depleting natural resources and labor wages, which must undercut other labor-based markets. As a result, a limited number of students will truly reach their full potential, a shrinking number of China-native companies will have their own intellectual material to depend on and ultimately the nation of China will fall further and further behind its Western peers.

Chapter 3

Research question

In examining the inequities in the Henan province in higher education settings as they relates to the NCEE, admissions policies, and geographical discrimination, the following research question and sub-questions will guide this investigation:

- What is the causal explanation for the inequities experienced by students in Henan province in higher education settings?
 - Why is so much emphasis placed on college entrance exams as a requirement for admission?
 - Why do Henan students need higher college entrance exam scores than other students?
 - Why are Henan students routinely subjected to inequitable admission policies and procedures?
 - Why do Chinese top tier universities not select Henan students who have higher scores than their peers thus creating a lower acceptance rate?

Purpose and significance of the study

Henan students have experienced inequities in Chinese higher education settings. These inequities mean that students from Henan province must achieve higher scores on the Chinese National College Entrance Examinations (NCEE) than their peers, with no guarantee of college admission into Chinese top tier universities despite having higher scores than their peers and meeting all admissions requirements (Wang, 2010). This

unequal playing field becomes even more severe when one considers that fact that in the Henan province, there exists only one Chinese top tier university, adding the lack of higher education resources to the situation that is already difficult to accept (Guo, Hao, & Guo, 2015).

Clearly these factors and others call for strategic investigation into the inequalities that Henan students experience in Chinese higher education settings both to improve upon the current Chinese college admission system and to also ensure that fairness and equity will be utilized when considering Henan students for admission to higher education institutions (Wang, 2010). Such an investigation would further the research specific to Henan province educational experiences and reforms that has been previously published regarding the dynamics and complexities of the associated with this issue for Henan students. A comprehensive study is needed in order to review, document, and describe what is currently known about the NCEE, current admissions policies, and geographical discrimination that exist in Chinese higher education settings in the Henan province.

Methodology

This study applied a qualitative case study design with a questionnaire method. The purpose of a qualitative study is to provide a deeper and interpreted understanding of the world of the research participants by seeking to understand their circumstances, experiences, perspectives, and even histories (Moriarty, 2011). In the current study, these experiences refer to that of Henan students who passed the Chinese National Collegiate Entrance Examination (NCEE) and their perspective on the admission policies of top tier

universities outside the province towards Henan graduates. The case study approach is known for its highly detailed, extensive, and information-rich data compared to the more structured and data controlling quantitative approach. Interactive and developmental contact between the researcher and the research participants are inherently required in order to maximize the development of emergent issues surrounding the phenomenon of interest, specifically relevant to this study, the inequities experienced among Henan students in relation to higher education policies. Additionally, the purpose of the case study design is to acquire a holistic, in-depth, and multiple perspectives of the perceived inequities in the policies of higher education in the Henan province in China (Carolan, Forbat, & Smith, 2015). This approach is particularly well suited for examining the complexity of the educational system in Henan province and flexible enough to employ mixed methods, which are often qualitatively driven.

Yin (2009) typified case studies as either descriptive (i.e. mainly describes the phenomenon being studied), exploratory (i.e. explores unknown characteristics of the phenomenon), or explanatory (i.e. gathers information that may explain characteristics of interest in a phenomenon), which can be also either a single-case study or a multiple-case. Meanwhile, Stake (2005) typified case studies into three types: intrinsic, which seeks to establish an understanding of a particular case for its own value and comparable with Yin's descriptive type; instrumental, which aims to develop insight into a wider context and comparable with Yin's explanatory type; and collective (or multiple-case), which seeks to explore the meaningful contribution of single cases to other cases with similar characteristics and comparable with Yin's exploratory type. The current study

design is typologically consistent with Yin's explanatory type and Stake's instrumental type of case study.

According to Moriarty (2011), there are four advantages in using a case study approach. First, it can provide timely insights into factors that develop among the research participants, which affect the phenomenon of interest long before it can be detected by quantitative studies. It is due to the researchers' direct contact with the phenomenal environment; thus, providing direct insights into emerging developments and changes. Second, its inclusive use of multiple perspectives opens up into the study wide ranges of insights from different contexts of participant realities. This strength is also a central weakness in the case study design, however, it uses a relatively less developed data analysis. Third, outcomes of the study are highly accessible to the readers as the study contexts may easily resound in the readers' personal contexts. And, fourth, the flexibility of the data is also impressive.

Yin (2009) offered five analytical approaches to understanding case study data, such as pattern matching, time series, explanation building, program logic, and a less understood technique called cross-case synthesis. Conversely, Stakes (2006) viewed data analysis as proceeding in five stages, namely, description, categorical aggregation, pattern matching, and naturalistic generalization. However, this perceived 'underdevelopment' may be construed as a unique advantage in terms of flexibility, which allows the use of approaches alone or in combination. Such openness allows the emergence of concepts and ideas, which are expected to produce descriptions, themes, associative patterns, and eventual explanations that provides better understanding on the phenomenon of interest in the study (Moriarty, 2011).

Research design and procedures

The data for this study was gathered through an email questionnaire that contained four open-ended questions allowing participants to respond with as many details as they liked. The researcher emailed the questionnaire and consent form along with the both an English version and a Chinese version to the coordinator at University of Shanghai for Science and Technology. The completed questionnaires were emailed to the coordinator using an email address set up for the purpose of this research. Upon receiving the email responses, the coordinator removed any and all identifiers from the responses (if any existed) and saved each questionnaire using a code that used a number and either an M for a male student or an F for a female student (examples; Student 1M, Student 2F).

After they were stripped of their identifiers, all six completed questionnaires were then attached to one email and sent by the coordinator to the researcher. In addition, the coordinator deleted the student emails from his or her email inbox, deleted the word files from his computer and then emptied the trash to better assure that the responses were no longer in his possession. Therefore, all responses were de-identified.

Instruments

Four open-ended questions (Appendix A) asked the participants to address the equity issues in Chinese higher education with a specific focus on Henan province. All four questions were included in the emails to Henan students who were currently studying at the University of Shanghai for Science and Technology.

Sample selection and size

The sample included six students whom came from Henan province and were currently studying in the University of Shanghai for Science and Technology. The sample included three males and three females to allow the researcher to learn about any differences by gender.

Collection of data and method of data analysis

The respondents' completed questionnaires were emailed to coordinator who then emailed them to the researcher's school email address. The researcher downloaded the completed questionnaires and pasted the responses into a Microsoft word document. Data and narratives were analyzed by the close-reading method. The data and narratives from the questionnaire responses were used to inform the research question regarding factors that contributed to the development of equity issues for Henan students and Henan province.

Most of the data were qualitative. These data were subject to a general interpretive process of close reading that involved identifying patterns of thinking and acting, in order to discover regularities and uncover anomalies (Miles, Huberman, & Saldana 2014). Because of the nature of the text, this involved either coding categories (analyzable by writing propositions about meaning). The trustworthiness of information was tested by the researcher taking several passes through the data.

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Analysis of Cases by Participant

Case No. 1: College Freshman (first year), female, from Henan province, now studying at University of Shanghai for Science and Technology

Student 1F described some central characteristics of the perceived “inequality and inequality” against students from Henan province. First, she observed the disproportionate ratio between produced candidates for college studies and the admission limits in colleges for applicants from the province.

Second, she decried over the hard effort placed into their studies as mere tool for the Chinese NCEE cannot be justified by the quota limits imposed of their college admission. In fact, she noted that admission of Henan students in college institutions in China requires higher NCEE scores than of students from other provinces.

In effect, she commented that Henan students had to work harder (i.e. for higher NCEE scores) than other students from other provinces in order to gain admission, especially in top tier colleges. She provided an example of a student from Shanghai who easily gained admission to college even without learning the Mathematic subjects Henan students are required to learn.

This inequality in the admission scores and quota, however, appeared to result into two advantages to Henan students as far as Student 1F was concerned. First, the intensive study that Henan students have to go through to prepare for the NCEE provided them the advantage of higher knowledge levels that students from more favored provinces are not required to have. Second, it also trained them in the rigor of serious study that may also become advantages as far as achieving better academic outcomes in college and thereafter at work.

Case No. 2: College junior, male, from Henan province, now studying at University of Shanghai for Science and Technology

Student 2M noted that, despite the uniform content in the Chinese NCEE conducted in the Henan province and other provinces (e.g. Beijing and Shanghai), the high admission score required along with the lower admission quota constituted the primary points of inequity and inequality in the current education system. The primary

obstacle, however, in his view is the higher admission score: “The only obstacle for us as Henan students is the higher admission score on NCEE than other provinces to go to Chinese top tier university in other provinces.” This observation indirectly reflected the theme of extra hard work required of Henan students to put into studying and building up knowledge in order to prepare for the NCEE.

Conceptually, the inequity also lies in the inequality against the Henan students for “educational opportunities”, which is reflected in their lower admission quota than for students from other provinces. For him, this variance constitutes a “considerable competitive” disadvantage and a clear display of unequal opportunity as compared to other students from other provinces.

He noted that only one top tier university exists in Henan province, the Zhengzhou University; while other provinces at least have two top tier universities. It is, however, unclear on the reasons of this Henan student for not choosing to study at Henan’s top tier university. It is also unclear whether or not Zhengzhou University also had the same lower quota for the admission of Henan students.

Student 2M, however, considered the educational reform pertaining to an increase in the admission quota for Henan students in any top tier school anywhere in China apparently as the more important educational reform that would be a means to satisfy equal opportunity for Henan students.

Case No. 3: College senior, female, from Henan province, now studying at University of Shanghai for Science and Technology

Student 3F noted the NCEE examination content and the disproportionately high admission scores required for students from the Henan province compared to students from other provinces. Her comments contained an undercurrent of protest for the unequal educational opportunities imposed by the higher NCEE score requirement.

She made clear her desire to leave Henan province and not to apply to the colleges or universities there. Her response reflects strong adverse experiences connected to her life in the province; strong enough for her to desire to leave the province for good and find a life somewhere outside the province. Thus, the high NCEE score requirement for top tier school admission was her most important career barrier.

She also noted that the application processes for in other top tier colleges and universities are relatively similar. It is only the higher admission score requirement, in her opinion, that makes it difficult for Henan students to study in these institutions.

“Henan students are required higher admission score than others.”

Student 3F’s greater emphasis on the barrier of higher admission scores reflects her views that the limited admission quota in colleges and universities outside the Henan province was not a strong barrier for her. Perhaps, she believes that the admission quota is less problematic than the higher admission score, confident that if she achieved that high NCEE score, she will be accepted without question into the institution as a student.

Case No. 4: Graduate school student (first year), female, from Henan province, now studying at University of Shanghai for Science and Technology

Student 4F was more passionate in her perception of inequality in her responses involving the educational prospects of Henan students in studying at top tier colleges or universities in the provinces outside Henan: “As a student from Henan, I certainly feel inequitable from my heart.” Apparently, her strong feelings of inequity originated from the real problem created when her “NCEE didn’t go well”, which resulted in her admission to only the regular colleges and her inability to even apply for top tier universities or colleges. Moreover, it is important to understand that academic failure in a student’s first choice college or university would add the requirement of top tier school graduation before the second choice college will approve admission. Her concerns, therefore became even worse when she thought about applying for graduate studies, for which she believed, regular schools could not prepare her. Moreover, graduate schools refuse to admit Henan students who have not graduated from top tier colleges or universities.

She illustrated it clearly when she said that, for the same NCEE score, Henan students may not be able to attend top tier colleges and universities because of higher score requirements that are inexistent for students from other provinces and allow these students to be easily admitted. With “the same score [a] student made on the Chinese National College Entrance Examination, if you are [a] Henan student, you may not be accepted by the Chinese top tier [universities]; but you may get into the same top tier university with the same score if you are the student from other province.” In effect, this requirement would cause Henan students to lose the race even “from the starting line”.

Another adverse effect involved the reduced options in choosing what to major during a student's college studies. Of the six student participants, Student 4F was one of those who referred to the situation as "discriminatory".

Case No. 5: Graduate school student (first year), male, from Henan province, now studying at University of Shanghai for Science and Technology

Student 5M took note of the protectionist policy prevailing in colleges and universities outside the Henan province. These provinces want to protect their local students from getting displaced in their local colleges and universities. This policy is expressed in the form of higher NCEE score requirement and limited admission quotas that make it more difficult for Henan students to get in. His statements invoked a sense that only students from the Henan province experienced this unequal treatment. The others are being admitted even for their first choice of a college or university.

Of the six students interviewed, only Student 5M called the Henan education system "enslavement education". This reference alludes to the highly determined and focused education approach, which uses the passing of the NCEE with high scores as the only and ultimate target to reach. This type of education system, according to him, compelled many Henan students to leave the province and never return; perhaps to spare their future generations from experiencing the same "educational slavery". He specified that there is a 30-40 point higher score requirement applied to Henan students but not to students from other provinces. Student 5M did note though that the government has made a "few changes over the years... but still needs to develop better and equitable admission policy."

Case No. 6: Graduate school student (first year), male, from Henan province, now studying at University of Shanghai for Science and Technology

For Student 6M, the unfairness in the Henan education policy is reflected in the fact that “Henan candidates normally are required relatively higher admission score and few admission quota.” The situation exists despite the fact that the same NCEE examination content is used among students in Henan and other provinces. As a result of the higher admission score, a large majority of Henan candidates for college or university admission had to “retake” the examination in order to get into a better college. The repeated experience of being required to retake the NCEE examination by many Henan students who failed to reach the high admission score proves especially frustrating since their scores are equal or comparatively higher than students from other provinces who gain are seen as gaining entry with apparent cases. This factor was the source of Student 6M’s stronger source of resentment for students from other provinces and sympathy for fellow Henan students who had to go through the ordeal of repeated re-examination in their hope of entering advanced educational institutions outside the province.

Student 6M mentioned the advantages and disadvantages in the current education policy, yet nevertheless, believed that more disadvantages are to be found. He attributed these disadvantages to the “current college entrance examination system”, to which he directed his call for reform in the current education system.

The impetus for Henan students’ like Student 6M to be strongly motivated to avoid studying in Henan’s only college, under the Project 211, can be traced from the perception of lesser quality of education under Project 211 as opposed to institutions under Project 985, which Yandong (2014) considered as more elite educational

institutions reputed for their first-class educational offerings and constitute only 39 universities around the country.

Comparison of Cases by Questions

Question 1: Please describe your experiences with Chinese National College Entrance Examination (NCEE). Do you have examples from students who are not from Henan that illustrate their experiences with NCEE? Based on those examples, do you feel your experiences as a Henan student are similar to students from other provinces? Why or why not.

Described experience: There are commonality in the experiences of inequality or inequity among the six students interviewed in this study. However, they differ in the perceived source of these inequalities. Three students (S1F, S2M, and S5M) attributed this inequality to non-proportionate admission volume (i.e. low admission quota) for Henan students into the “top tier” (Project 985 or 211) colleges and universities outside the province; while four students (S2M, S3F, S4F, and S5M) attributed these inequalities to the higher admission NCEE scores for Henan students, as contrasted with students from non-Henan provinces, despite having to take the same content of the NCEE examination.

Moreover, one student (S6M) viewed the unfairness as primarily due to the limited “top tier” schools found in the Henan provinces: only one Project 211 college and no Project 985 institution. One student (S4F) described her experience of the inequality of educational opportunity as discriminatory (“My experiences of the application [I made] on both graduate school and undergraduate college were subject to

discrimination.”), and another student (S5M) noted the protectionist policy of educational institutions in other provinces (“Every province has protection policy.”). Moreover, one student (S5M) viewed the Henan education as enslaving (“Henan is located in the Central Plains of China... a major agricultural province; the education itself is problematic [and] for generations, for thousands of years, of enslavement education.”). And finally, one student (S4F) also reported that the high admission score policy acts as barrier for her graduate school studies in the future.

Examples from non-Henan students: Three students (S2M, S3F, and S4F) provided a general mention (no mention of names or indication of knowing the student personally) of students “from other provinces”, such as Beijing (S2M) and Shanghai (S2M), who underwent the same NCEE examinations as the Henan students but received better chances to choose from colleges in which to enroll. These students from other provinces either had lower admission NCEE scores (S2M, S3F, S4F, and S5M) or higher admission quotas (S2M and S5M) or both (S2M and S5M). Only two students (S1F and S6M) did not describe similar or comparable NCEE experiences with non-Henan students.

Similarity of experiences with non-Henan students: All students reported having opposite experience than students from non-Henan provinces with respect to admission policies. Specifically, their experiences involved higher admission NCEE scores (S2M, S3F, S4F, and S5M), lower admission quota (S2M and S5M), and both (S2M and S5M) which were opposite from what non-Henan students are experiencing. Two students (S1F and S6M) had no basis of comparison of their experiences with non-Henan students.

Q2: What was it like for you as a Henan student to apply to colleges located in other provinces? Please provide the details of your experiences including any barriers that you feel are directly related to you as a Henan student.

The Henan experience: All Henan students interviewed were unanimous in describing their experience as being required to produce a higher admission NCEE score than students from other provinces, which Student 5M described as 30 to 40 points higher than the NCEE scores of students from other provinces. Two students (S1F and S5M) looked at it with dispassionate eyes, which in S1F's words were "Nothing special; that's it". However, more students (S2M, S3F, S4F, and S6M) described the experience more passionately and noted strong frustrations (S2M, S3F, S4F, and S6M). Student 6M described the source of these frustrations noting the many personal sacrifices he paid in exchange for achieving higher NCEE scores, which sometimes did not produce any admission reward.

One student (S2M) saw the application and admission process that are followed in the Henan province and in other provinces as largely similar. The same student singled out the limited opportunities in the Henan province compared to other provinces due to the limited availability of top tier schools; that is, only one can be found in the province, which is the Zhengzhou University. Conversely, S5M interpreted this policy as local protectionism aimed at protecting "their local students" from admission competition with Henan students.

Observed barriers: Three students (S1F, S5M, and S6M) did not exactly describe or mention the inequities experienced, or did not perceive them as a barrier. However, the other three students (S2M, S3F, S4F) did, particularly the higher admission NCEE score

(S2M and S3F) and the limitations imposed in choosing a major (S4F). These inequities were perceived as barriers towards admission to a “better college” (S2M), particularly the top tier (Project 211 or 985) colleges and universities, as lower scores (i.e. below the higher cut off scores) means a sole admissibility into the regular colleges (S4F).

Q3: Please describe your experience applying to top tier colleges or universities (“211” and “985”). Do you know of any examples from students who applied to the top tier colleges from other provinces? Based on those examples and your own experiences, do you feel that your experiences are similar to the students from other provinces? Why or why not?

Experiences in applying to the top tiers: In general, Henan students reported being treated in the admission application with inequality, which made them, particularly Student 2M, feel deprived of an equal opportunity both to study and to choose which school in which to study. Student 5M mentioned the many failures that Henan students faced with the inequitable admission requirements. Student 6M said that these failures can be seen in many Henan students re-taking the NCEE to get higher scores in order to create a better chance of getting into a top tier college or university.

In particular, though, the inequality revolved around harder preparation for the NCEE examination as a consequence of the preceding two issues; the lower admission quota, and the higher admission NCEE score requirement. One student (S1F) told of harder NCEE preparation and more difficult ordeal at admission to top tier schools than students from other provinces.

Two students (S2M and S6M) mentioned that the low admission quota allotted for Henan students caused them difficult admission challenges. Another two students (S3F and S6M) pointed out that a higher admission NCEE score for Henan students was the locus of unequal admission treatment of Henan students compared to students from other provinces. Student 6M perceived that the higher score requirement was “inequitable for first time examination takers”.

One student (S4F), in fact, refused to apply to a top tier educational institution. Her fear arose from the policy that if she student failed admission in graduate studies in a first choice college or university, the second choice institution would require graduation from a top tier college or university to be offered admission. Student 5M explained that admission score differences define the difficulty involved in applying for the first choice and the second choice college or university in which to enroll in. First choice admission scores are normally higher than second choice admission scores.

Conversely, Students 3F found the admission or application processes to be relatively similar. One student (S4F) described the policy of unfair admission NCEE scores for graduate school admission.

Examples from non-Henan students: Most interviewed students (S2M, S3F, S4F, and S6M) did not mention any examples from non-Henan students they knew. Only two students (S1F and S5M) described that their classmates from other provinces, mostly from Shanghai, have experienced lighter educational preparation for the NCEE than them. In addition, they felt these students were admitted with relatively more ease than those from Henan province.

Experiential similarities with non-Henan students: All students, directly or indirectly, felt that their application experiences were dissimilar to students from other provinces. They saw their experiences as exact opposite in all respects, such as higher required admission NCEE scores (S1F, S3F, S5M, and S6M), lower admission quota (S2M and S6M), and harder learning preparations (S1F). Two students (S2M and S4F) did not venture to compare their experiences with those students from non-Henan provinces.

Q4: Based on your own experiences and the examples that you shared from other students in questions 1 through 3, do you think that the current NCEE admission policy in Henan provinces provides advantages and/or disadvantages to students Henan students?

Advantages of the current NCEE admission policy: Only Student 6M indicated that there are advantages in the current NCEE admission policy; but without specifying those advantages. Instead, he reported that more disadvantages can be found in the current policy than advantages.

Disadvantages of the current NCEE admission policy: Most students (S1F, S3F, S4F, and S6M) viewed the current educational system at Henan province as disadvantageous to the Henan students indicating many disadvantages. Each disadvantages is describe briefly in turn.

First, in general, students saw the admission policy a unfair and unfavorable toward Henan students (S3F, S4F, and S6M).

Second, students reported that Henan student must spend more studying time (compared to non-Henan students) in order to achieve the required higher admission

NCEE score (S1F and S4F). Student 4F said that “Henan students have to spend more time and study harder and harder to get into the same college or university compared with our peers.” Student 1F passionately indicated that Henan students have to “give up a lot of [their] personal free time” in order to “study harder” to meet the higher admission score.

Finally, the higher admission NCEE score is seen as unfair because non-Henan students do not have to get the same higher scores as Henan students to be admitted into top tier colleges and universities. Student 4F put it this way: “Those students from other provinces do not need to have the scores as Henan students”.

Ambivalent reactions to the Current NCEE admission policy: Some students (S2M and S5M) did not feel particularly advantaged or disadvantaged due to recent reforms, that have increased the admission quota for Henan students (S2M). However, Student 5M believed that the government still needs to establish “better and [more] equitable admission policy and more fair treatments for Henan students”.

Summary and Conclusion

All six respondents experienced inequity over the current NCEE admission policy imposed upon Henan students who intended to enroll in ‘top tier’ (i.e., Project 211 or 985) colleges and universities outside their province, which apparently violates China’s Education Law wherein all students should enjoy equal basic rights to pursue higher education (Zhang, 2013; Hallak, 1990).

Half of these respondents emphasized the low admission quota imposed on Henan students in contrast to high admission quota experienced by students from other

provinces. Bai, Chi, and Xiaoye (2013) confirmed the current situation wherein the number of applicants for higher education “far exceeds the admission quota”. One student in the study noted a protectionist policy behind the low admission quota imposed on non-local students enrolling in local Project 985 universities. Bickenbach and Liu (2011) confirmed the accuracy of this observation. There exists a “home-biased pre-determined new student quota” in these universities, which effectively restricted cross-provincial mobility of students but apparently not restricted against Henan students alone (Chen, 2004; He, 2007).

Four of the six students interviewed decried the inequality of the high admission score required from Henan students, which one student estimated to be 30 to 40 percent higher than those demanded from non-Henan students. This aligns with the research of Zhang (2013), for instance, who noted that Shanghai locals only need an admission score of 497; while non-locals like Shandong (as well as Henan) students must produce a score of 684 to be approved for admission in Fudan University. According to Wang (2006), the majority of provinces had a perfect score of 750. The implication of higher admission score requirements is for non-local students, such as Shandong (as well as Henan), to obtain a score of 91.2 percent of the perfect score to gain admission in top tier colleges and universities.

The common impact of this educational inequity, that one responding student referred to as ‘discriminating’, centered on the unnecessarily high degree of time and commitment imposed upon Henan students in their studies, far beyond those imposed on non-Henan students, just to hurdle the high admission NCEE score. What’s more, those Henan students who managed to qualify in spite of the high score requirement, face yet

another hurdle in the form of the low admission quota, which bar the passers once again from entering top tier colleges and universities outside the Henan province. In 2010, only 6.5 million (68 percent) of the 9.5 million students who took the NCEE gained admission into a college program. The remaining 3.0 million (32%) either failed the NCEE or their scores were not high enough to pass the higher cross-provincial admission score required (Bai, Chi, & Xiaoye, 2013). Those who failed admission into college are required to either re-take the NCEE or seek employment.

As a result, this cross-provincial admission inequity has prompted some parents to relocate to large cities, acquire local residence, and ensure better education for children (Zhang, 2013; MEEC, 2008) or send their children abroad (Banks, Olsen, & Pearce, 2007; AEI, 2009). This forced migration to urban centers reflected one Henan student's observation that most of those who left the Henan province for the cities never returned.

Although half of the interviewed students believed that the same NCEE examinations were uniformly used among students in Henan and other provinces. However, Bickenbach and Liu (2011) noted that that is not so. Despite the term "national" in the NCEE nomenclature, different provinces may use different exam sheets for similar subjects, introducing variability in the test contents and results and preferential selectivity of contents in each province (MEEC, 2008). In effect, the norm of the NCEE is localized to the provincial level and cannot be generalized to all students in China even all took an NCEE examination at the same time. Zhang (2013) also observed the existence of urban-rural gaps in higher education between provinces. Perhaps, this variability and urban-rural educational gaps constitute crucial factors when considering the high admission NCEE score requirement for students from the Henan province.

A common thread among the six respondents in this study was the determination to pursue their higher academic studies not in Project 211 colleges, one of which can be found within the Henan province itself (i.e., the Zhengzhou University) but in Project 985. This low presence of higher education institutions in the Henan province reflects the urban-rural gaps, that resulted from imbalances in the provincial economic development and the personal income gap (Zhang, 2013). That explains the abundance of higher educational institutions in such rich commercial centers as Shanghai, which has 34 universities with 70 percent in higher education gross attendance. Comparatively, only 10 universities operate in Zhengzhou with a gross attendance of 23.66 percent, almost three times lower than in Shanghai.

The pursuit for Project 985 education is highly understandable though. Project 211 universities, which already reached 112 sponsored universities in 2014, was the government's first attempt, under the 9th Five-Year Plan (1996-2001) at raising the Chinese educational standards towards the international top level (Yandong, 2014). However, Project 985 universities had wen further beyond that. Established in May 1998 by former Chinese president Jiang Zemin, their program was to achieve the world first-class education standards. Only Project 211 universities are qualified to be sponsored as Project 985 universities. In 2014, only 39 universities throughout China are Project 985 universities. In a manner of speaking, while Project 211 universities, such as Zhengzhou University, has top international standards in their quality of education offerings, the Project 985 universities are a few of its kind with world first-class education standards. These world first-class education standards are what Henan students desperately aimed for and had been frustrated for due to the barriers imposed by the current NCEE

admission policy. However, while the Henan students validly hoped that the NCEE admission policy will be equalized by the government policy makers to level the field of entry into the Project 985 universities, they mostly missed the philosophical lessons behind the ‘weiji’ or ‘crisis’ character, which is comprised of two separate characters that mean ‘danger or anger’ and ‘opportunity’. The Henan educational situation has created developmental crisis and anger from Henan students due to the blatant inequity against them relative to students from other provinces. However, the higher demand for learning dedication to achieve higher NCEE scores had inevitably trained Henan students to develop strong work and study ethics that can support them in withstanding the eventual rigors of higher education and work life after school.

In a sense, this demand for rigorous discipline is inherently a gift that somehow had been unrecognized for what it could accomplish in transforming them into highly motivated students and workers, which would lead them to brighter future (e.g. Hlavka, 2009). Education had been a highly consistent predictor future level personal income (Rong & Shi, 2001; Lee, 2006; Ashenfelter & Rouse, 1999) as well as earnings increases (Wu & Zie, 2003; Zhou, 2000; Bian & Logan, 1996). That is the gift inherent in the policy of requiring higher admission NCEE scores.

The same giftedness, however, cannot be found in the lower admission quota policy, which restricted admission to Project 985 universities despite the high NCEE scores achieved. If reform should be prioritized, it should be in this policy. The admission quota for Henan students need to be increased at par with students from other provinces or, if no quota exists for non-Henan students, that quota for Henan students be finally removed. And, yet, Henan students have the right to an easier admission into Project 985

universities like students from other provinces. If reforms can eventually happen in the admission NCEE score, then the inherent giftedness of the imposed rigorous discipline by higher admission score will disappear from their midst.

Limitations

The current study has a few inevitable limitations observed. Even though this research contains data collected from three males and females of the data collection, the data shows no significant differences between the genders based on their perceptions of their responses to the prompts in the questionnaire. Of course, it may be the case that the topic is gender neutral, but since there were no questions that probed the experiences of female versus male students, the lack of such a question can be considered a limitation..

The sample size of six students is small. A small participant size, however, is an acceptable for case study research and allows a deep analysis of the narratives of each participant (Stake, 2005).

Another limitation of the study involves the anonymity of the respondents. Privacy is an inherent and instrumental aspect of research ethics (Drew, Hardman, & Hosp, 2008; Scott, 2005). Anonymity is an important aspect of privacy. In this study, all six anonymous respondents expressed negative criticism regarding the current NCEE admission policy. Their assurances of anonymity might not be enough to encourage the respondents to disclose all negative perceptions they had about the policy, therefore the respondent may have chosen to disclose only information that was perceived as politically correct enough or expressed general negative impacts for the disclosure even though the respondents were assured their comments were anonymous. Fox and Schwarz

(2002) noted that assurances for confidentiality from researchers may not be believable to certain respondents, especially when they already heard the same reassuring lines in previous studies that ignored their privacy and promises for confidentiality of disclosed information. Thus, the respondents may not display consistency in their answers to the same questions from different interviewers; thus, adversely affecting precision or reliability of the data obtained.

Perceived confidentiality of the information disclosed may also adversely impact on the quality and quantity of data (Wolf, Zandecki & Lo, 2004). Despite adequate coding performed in this study (Easter, Davis, & Henderson, 2004), such as the use of “Student 1F” to code the identity of the first student respondent, perceived confidentiality may be still ineffectively secured as far as the respondents are concerned. This respondent reaction may not be fully under the control of the researcher or the facilitator of this study. The confidentiality agreement has been waived in this study. The researcher, however, took precautions to protect the confidentiality of the information obtained from the respondents.

Future Consideration

Chinese higher education is regarded as the key to a successful career and a higher individual life quality in China. This puts enormous pressure on the young applicants seeking to secure admittance into a Chinese top tier university. This pressure causes social problems and educational issues as discussed throughout this study. To improve the system of Chinese higher education, future studies and researchers may focus on the admission process of Chinese higher education, to further investigate the

factors that contribute to its inequitable nature. These factors include but are not limited to: the ways in which multiple days of examination affect the applicant's life and the whole future; and, the ways in which applicants are facing the geographic discrimination during admission based on the NCEE.

The next logical step in this research would be to expand the present student to a grounded theory study to continue the cycle of interviewing and analyzing through constant comparison until saturation is reached, themes are repeated and nothing new is said by the interviewees.

It would also be wise to focus a study on graduate students. In the sample included in this study three of the six participants were graduate students and expressed stronger perceptions of discrimination and inequity. Perhaps a study focused on the experiences, perceptions, and narratives of graduate students from Henan province would expand our understanding of what happens to students once they graduate from bachelor degree programs and go on to apply for and enter graduate programs in top tier universities.

In particular, in regard to future consideration of Henan researcher, educators, students, parents, and other stakeholders, I strongly recommend efforts to develop similar future plans similar to my idea for a Henan Higher Education Engagement Plan (HHEEP) that recommends all the Henan universities or colleges develop open admission policies and lower admission scores for local Henan students. These actions could reduce the numbers of talented Henan students who emigrate to other provinces and access higher education outside of Henan province. In addition, these actions might enhance both the quantity and quality of the Henan colleges by keeping talented students studying in and

contributing to higher education locally in Henan province.

In summary, through future investigations, discussions and arguments, we may be able to improve future educational circumstances for Chinese students, educators and educational leaders. By investigating this significant issue in the Chinese higher education system/ what's more, future researchers and educational practitioners may be able to promote an alternative overview and development of Chinese education policy. By analyzing educational conflicts within the context of social status and resolving conflicts due to both the negative and positive impacts of the Chinese higher education system on students from various provinces, educational reformers might solve those discrepancies in order to develop a Chinese higher education system that is more socially just.

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Appendix

DUQUESNE UNIVERSITY

600 FORBES AVENUE ♦ PITTSBURGH, PA 15282

CONSENT TO PARTICIPATE IN A RESEARCH STUDY
[Must be written at an appropriate reading/health literacy level]

TITLE: **Inequity within Chinese Higher Education with the Focus on Henan province**

INVESTIGATOR: Zhe Ji, Ed.D. in Education Leadership Program, Doctoral Candidate, Department of Foundation & Leadership, Duquesne University; [REDACTED]
[REDACTED]
jiz@duq.edu

ADVISOR: (if applicable) Dr. Connie Moss, Director, Ed.D. in Education Leadership Program, Department of Foundations & Leadership, Duquesne University; +1.412.396.4433; moss@duq.edu

SOURCE OF SUPPORT: This study is being performed as partial fulfillment of the requirements for the doctoral degree in Education Leadership at Duquesne University.

PURPOSE: You are being asked to participate in a research project that seeks to investigate Henan students' perspectives on the Chinese National College Entrance Examination (NCEE), Chinese higher education admission policies, and relevant equity issues. In order to qualify for participation, you must be a Chinese college student who comes from the Henan province and is studying at the University of Shanghai for Science and Technology in China.

PARTICIPANT PROCEDURES:

To participate in this study, you will be asked to provide your answers to a Word document questionnaire which contain four open-ended questions that accompany this informed consent information. Your responses should be emailed back to the coordinator within 2 weeks from receipt of the questions unless your schedule prevents you from doing so. In that case, inform the coordinator of the soonest time you can email your responses. This is the only request that will be made of you.

RISKS AND BENEFITS:

There are minimal risks associated with this participation but no greater than those encountered in everyday life.

Your participation in this research will be a valuable input towards developing a deeper understanding of equity issues in Chinese higher education that will contribute to the engagement of Henan students not only in the University of Shanghai for Science and Technology but also in Chinese higher educational settings and processes.

COMPENSATION:

There will be no compensation for participation in this study. Participation in the project will require no monetary cost to you.

CONFIDENTIALITY:

Your participation in this study and any personal information that you provide will be kept confidential at all times and to every extent possible. Your name will never appear on any survey or research instrument. All written and electronic forms and study materials will be kept secure. Your responses will only appear in statistical data summaries. All study information will be stored in a locked file in the researcher's apartment in the United States for three years after the completion of the research and then destroyed.

RIGHT TO WITHDRAW:

You are under no obligation to participate in this study. You are free to withdraw your consent to participate at any time by leaving the questionnaire incomplete.

SUMMARY OF RESULTS:

A summary of the results of this research will be supplied to you, at no cost, upon request by emailing jiz@duq.edu.

VOLUNTARY CONSENT:

I have read the above statements and understand what is being requested of me. I also understand that my participation is voluntary and that I am free to withdraw my consent at any time, for any reason by simply not completing the questionnaire and emailing my responses. On these terms, I certify that I am willing to participate in this research project by completing and emailing my completed questionnaire to the coordinator.

I understand that should I have any further questions about my participation in this study, I may email Zhe Ji at jiz@duq.edu or call at +1.412.801.2890 and Dr. Connie Moss at moss@duq.edu or call at +1. 412.396.4433. Should I have questions regarding protection of human subject issues, I may email Dr. Linda Goodfellow, Chair of the Duquesne University Institutional Review Board, at goodfellow@duq.edu or call at +1.412.396.1886.

CONSENT TO PARTICIPATE IN A RESEARCH STUDY
[Must be written at an appropriate reading/health literacy level]

Chinese Version

- 研究课题:** 以河南省为例的中国高等教育公平性问题的研究
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- 资源支持:** 该研究是基于满足杜肯大学教育领导学博士学位的所有要求所展开的调研。
- 研究目的:** 您被邀请参加一个研究课题, 它目的是为了调查河南考生对中国高考, 以及高考录取政策中所存在的不公平问题的个人意见, 参加该项目的标准是: 您是自河南省的学生, 目前正在上海理工大学读书。
- 参加程序:** 在参加该研究课题时, 您会被请求完成一个简短的调查, 该调查中有四个简答问题参加者可以随意回答, 不限长短要求。您有两周的时间回答该调查, 并且通过邮件发回给协调员, 如果您的时间安排太紧, 没法及时完成, 请您通过电子邮件通知协调员, 最快何时能完成。这是对您参与该研究课题的唯一要求。
- 危险和益处:** 参加该调查问卷所伴随的危险极小, 但不会比日常生活中所遇到的危险要大。您对该研究课题的参与将提高人们对中国高等教育公平问题的认识和理解。
- 补偿:** 参加该研究课题是无偿的。但是却也不会花费你任何经济开支。
- 保密:** 您参与该研究课题是保密的。您所提供的任何个人信息我们都会尽我们最大的能力来保密。您的名字永远不会出现在调查问题的回答上。所有的手写或电子文档资料都会被保密保管好。您所回答的只会用于研究课题后期的数据分析。所有的研究信息和数据会在研究结束后保留3年, 然后就会被销毁。
- 随时撤销的权利:** 您参与该研究课题是完全自愿的, 您拥有随时可以撤销的权利。您只要放弃回答问题就可以。没有彻底完成的问题是无效, 我们不会收集这些数据。

研究结果: 如果您要求, 该研究结束后, 调查的结果可以免费给您提供一份。

自愿参与授权: 我已经读过以上所述, 也明白该研究课题要我做什么。我也明白我的参与是完全自愿的, 我可以随意随时撤销参与该研究课题。综上所述, 我证明我自愿参与到该课题的研究。我明白如果我对参与该研究项目有任何问题, 我可以发邮件或电话咨询吉喆和 Connie Moss 教授, [邮箱是 jiz@duq.edu](mailto:jiz@duq.edu) 或 moss@duq.edu, 号码是 412-801-2890 或 412-396-4433. 如果我对保护研究参与人有任何问题, 我可以打这个电话 412-396-1886 给杜肯大学 Linda Goodfellow 博士, 她是该大学的保护研究参与者委员会的主席。