Pathways to Equality: *A Study on the Impact of Students' Social Network and Family Capital in Chinese Higher Education*

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Abstract

Higher education institutions in China have increased in popularity over the last decades. Attending average higher education institutions cannot satisfy the current job market anymore. Students have to work harder to be able to graduate from elite universities to compete with others. Nonetheless, elite universities have fewer spots and only admit a few students. Numerous Chinese students are competing for limited spots, and competition is certainly not fair. Even though the Chinese higher education system has been fair to most students by practicing the unified college entrance exam, education inequalities still exist, and students from disadvantaged backgrounds often have a more difficult time competing with their peers. In order to provide equal access to higher education and to help students achieve their goals of attending elite universities, this current study examines students from non-elite universities (also known as non-project universities) in China and through study their past experiences and attitudes toward education inequalities, it becomes possible to know the factors that can influence their academic achievements. By Understanding the causes, it is possible to help students from similar backgrounds in the future to reach their dreams.

This dissertation took the view from both education and sociology and incorporated two social theories, social capital theory and family capital theory, as its theoretical frameworks to examine the possible causes of education inequalities in China. This study integrated mixed methods, a quantitative survey and qualitative semi-structured interviews, to form a more comprehensive understanding of the current issue. All participants were current non-project university students or had graduated from non-project universities. Most of them came from disadvantaged socioeconomic backgrounds and struggled with equal access to educational resources in their careers. This study primarily examined some possible factors, such as social networks, family financial support, and socioeconomic status, that might affect students' academic achievements and hinder them from getting into elite universities. This study aims to investigate the effect of social capital and family capital on students and hopes to provide new directions for future studies in the field.

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Key Terms

Academic achievement gap: This gap first refers to Chinese students' attendance at Project 985/211 and non-project universities. Then, this gap continues to look for any resources and social networks these students end up having in non-project universities.

Educational outcome: This study refers to educational outcomes, such as the types of universities the students graduate from (Project 985/211 versus non-project universities) and their career outcomes.

Social Capital Theory: The theory is viewed as how people use their network of relationships to benefit themselves in achieving their goals and creating a better outcome (Lin, 1999, p. 31).

Family Capital Theory: This supplementary theory emerged from social capital theory and is viewed as how family members use their resources and capital to help their children achieve better results.

***Hukou*:** The household registration system in China.

Chapter 1: Introduction

Chinese higher education has been significantly expanding, and the higher education enrollment rate has increased to more than 40 percent in recent years (Du, 2018). It is becoming more accessible to attend higher education institutions in China. However, an increased attendance rate does not indicate equal access to education, especially as it has become more challenging for lower-class and rural area Chinese students to access top universities. According to a recent news article, rural students face more difficulties in accessing top universities than urban students, and such inequality is also shown between higher and lower-class students ("Education in China", 2021). Many Chinese empirical studies have also indicated such issues of inequality. Particularly, empirical studies have examined the unequal access to elite universities (mainly Project 985 and 211 universities) from various perspectives, such as family, demographics, or labor markets (Shu, 2008; Peng & Chen, 2014; Qu & Lv, 2020). Many other empirical studies also examined some common educational inequalities from a sociological perspective and incorporated different social theories to explain the current issue of the Chinese education system (Liu & Gao, 2015; Jin et al., 2017; Afridi et al., 2012). However, the research gap is still wide open from the perspectives of equal access to elite universities from a combination of social and educational backgrounds. The more urgent issue is to uncover the possible causes of such inequalities and provide students with equal access to higher education in the Chinese education system. In order to close such a research gap and give more insights, this study takes on the views of non-project university students and adopts two theoretical frameworks, social capital theory, and family capital theory, to examine the academic achievement gap between Project 985/211 university and non-project university students in China. Therefore, this study examines these educational issues under the current Chinese education system and further discusses the effects of socioeconomic status and the rural-urban gap on students' academic achievements.

1.1 The Current Issue: Educational Inequality in the Chinese Higher Education System

The Chinese government has formulated many strategies to reduce educational inequality, and one well-known procedure is gaokao. The unified college entrance exam, gaokao, is one of the Chinese government's policies to reduce education inequalities. This exam allows a fair chance for students to enter higher education institutions. All students in China are able to take the exam in their final year of high school. The college entrance exam is known to provide the

only bridge for all urban and rural students to enter universities of different tiers (Liu et al., 2019; Chen & Kesten, 2017). Nonetheless, there are still inequalities under this 'fair' policy. However, inequalities still exist because of the students' various social classes and their family backgrounds (Luo et al., 2018). For instance, students from families with higher socioeconomic classes are able to receive a better quality of education during their high school years, and more help is given to them from outside resources. Scholar Luo indicates that some students from higher socioeconomic classes are able to receive early admission by having bonus scores. This is usually done by receiving awards or specialization in certain areas, such as arts and sports (Luo et al., 2018). She also points out that "this opens room for the advantaged social groups to make use of their social resources to help their children get training in such 'talents' and get prizes and awards designated by institutional policies" (Luo et al., 2018, p. 1018). The use of resources for a better outcome is the representation of social capital and family capital, which can further cause achievement gaps between students from different backgrounds.

1.1.2 Background Context: The Rural-urban Gap and Migration in Major Chinese Cities

The rural-urban gap plays a significant role in explaining educational inequalities in the Chinese education system, as many news articles and empirical studies have highlighted such a connection. Scholar Zhao describes that the rural-urban gap exists in many aspects of life, such as education resources, income differences, and healthcare quality (Zhao, 2020). Rural people are aware of this gap. As an essential step toward upward social mobility, many families from rural areas are migrating to major cities in China in hopes of accessing better education for their children. Universities in urban areas are usually rich in resources and foster innovation. These urban universities are more likely to be Project 985 and 211 institutions, while those universities located in rural areas are usually vocational, associate, and Minban institutions[1]. To better understand the importance of these universities' effect on the rural-urban gap, it is necessary to explain the ranking system between them, as the current study will look into participants who are not from Project 985 and 211 universities.

In the 1990s, China aimed to " rejuvenate the country through science and education" (Guo, 2020, p. 30). In order to achieve this goal, China set aside funds to establish universities

[1] Minban institutions usually rank at the bottom of the university ranking. There are three types of Minban HEIs: "The 'independent college' affiliated with a public comprehensive university but financed and run by social powers; the so-called transformed institutions which were once publicly owned but now privately run; and private HEIs" (Luo et al., 2018, p. 1017).

that match the other elite universities around the world and to develop the quality of Chinese higher education institutions (Li, 2020). Project 985 and 211 universities are known to be the top institutions in China, along with the first-rate universities. Scholar Li gives a better explanation of the differences between these top universities in China. Li states that Project 985 is in the top tier as thirty-nine universities are qualified for this title, including Tsinghua University, Peking University, Zhejiang University, and others. Project 211 institutions are the next tier, and around one hundred universities are qualified for this title. There are first-rate universities after Project 985 and 211 schools (Li, 2020). These first-rate universities are considered sufficient but less competitive than the Project 985 and 211 schools. First-rate universities, along with other institutions such as vocational, associate, and independent institutions, are the target groups of this study. By examining the past experiences of students from such backgrounds, this study will be able to unpack the challenges that these students faced during the process and find ways to provide suitable help and proper resources for students to get into Project 985 and 211 universities in the future.

To qualify for Project 985 and 211 universities, students usually have to be ranked at the top and have high gaokao scores. The process of getting into these elite universities is complicated and difficult as more and more students are competing for limited spots. For a higher chance of entering Project 985 and 211 institutions, families from both urban and rural areas are competing with each other for the education resources that are available in school and outside of school. Families migrate from rural areas to major cities, such as Beijing, Shanghai, and Shenzhen, for better quality of education. Many studies have shown that families from rural areas usually have lower socioeconomic statuses, and they struggle to set foot in these cities, especially if they have less advantaged backgrounds compared to urban *hukou* holders (Li, 2013; Afridi et al., 2012; Xie, 2016). Moreover, migrant parents usually have fewer connections with their children as they are busy earning more paychecks to support the family and cover additional education expenses. Scholar Xiong gives an example of the difficulties migrant families have to face when moving to cities. Xiong indicates that migrant households are not qualified for free mandatory education in the cities due to *hukou* status. They are obliged to pay additional fees to send their children to private migrant schools (Xiong, 2015). This results in migrant parents working overtime or holding multiple positions to provide for the family. Family interactions and connections are a critical part of family social capital. Migrant households with

less family social capital can result in less social mobility for their children and impact on education development (Jin et al., 2017; Xiong, 2015). Students from migrant families have a more significant achievement gap compared to students whose families have been in the city for a long time. In considering all the hardships rural and lower socioeconomic students have to face when accessing educational resources, this study takes the side to examine students from non-project universities as most of them come from these disadvantaged backgrounds, which are typically more vulnerable and less advantageous in competing for resources. This study is conducted in the hope of raising awareness among educators and policymakers to pay more attention to students who are less competitive and consider providing more resources to them when needed.

1.2 Main Research Question

How do social capital and family capital affect students' academic achievements[2]?

1.2.1 Sub Research Questions

How does family financial capital affect their academic achievement in college?

What are the connections between family social capital and students' educational outcomes?

Do social networks make a difference in students' academic achievements?

What roles do social capital play in causing educational inequalities?

The current study aims to answer these research questions by first discussing previous literature and empirical studies and then incorporating social capital theory and family capital theory into its theoretical framework to demonstrate a deeper understanding of the current topic. In addition, methodology and findings are presented to provide a more complete structure for the study. Lastly, the study further discusses the significance of the findings and connects them with previous empirical studies for more profound reflections.

[2] Academic achievements in this case refers to students' achievements before, during and after college.

Chapter 2: Literature Review

This chapter aims to analyze the literature on education inequalities and examine the academic achievement gap in China while incorporating two main theoretical frameworks into the present study. The following section will be presented in two parts. The first part of this chapter will explore existing literature and empirical studies to discuss some of the common causes of educational inequalities and the academic achievement gap among Chinese college students. The second part of this chapter will discuss the main theoretical frameworks, social capital theory, and family capital theory individually and follow them up with two sub-theories and a unique example of the Chinese household registration system, *hukou*. Insights are gained through interpreting empirical studies while using theoretical frameworks to address educational issues in the current Chinese society.

2.1 Academic Achievement Gaps

Academic achievement gaps have been a popular topic when talking about educational inequalities. According to the National Assessment of Educational Progress, the academic achievement gap is defined as one group exceeding the other group on academic performances, and this study refers to the academic achievement gap between Project 985 and 211 universities and non-project university students, and especially looking into those non-project university students with different social statuses. Academic achievement gaps are still affecting Chinese students even under the mandatory education policy, and they are especially common in low socioeconomic families and migrant students as they lack advanced educational technologies and resources (Wu & Wang, 2008). Even though the Chinese government is helping students from low socioeconomic backgrounds by implementing policies to reduce tuition and school fees, achievement gaps are still there (Chyi & Zhou, 2014). Scholars Liu, Ku, and Morgan talk about the causes of these gaps. They indicate that students from low socioeconomic backgrounds usually have a significant gap despite their grade levels. Scholar Liu gives an example of how children from middle and upper households would hear 32 million more words before the age of four compared to low-income families, who are less likely to spend time and provide a learning environment for their children (Liu et al., 2019). This finding means that even during the mandatory stage, students from low socioeconomic backgrounds start to fall behind compared to their peers from middle and higher classes. The gap will only become tremendous during high

school and college. Students from low socioeconomic backgrounds usually have a lower chance of getting into Project 985 and 211 universities even though they view the college entrance exam as “the sole entrance ticket to college” (Wu & Tarc, 2021). It becomes problematic when these students are trying to increase social mobility and have a better income when students from higher classes have most of the resources.

Academic achievement gaps are also affected by social networks and family interactions. When the family pays more attention to their students’ schooling, students are able to receive help when needed (Jeynes, 2007). The same outcome for families with more social networks is that they can use their connections for better education resources, such as private tutors, qualified teachers, or even transferring their students to better schools (Wu & Tarc, 2021). Scholar Wu and Tarc’s study (2021) shows that the English language proficiency achievement gap does exist between students who are from rural (mostly low socioeconomic) and urban (middle and higher classes) backgrounds. This gap continues to show up even when these students are in college (Du, 2011). This gap is also affected by family capital when Wu and Tarc talk about some parents being unable to give any English-related support because the parents did not graduate from college. Furthermore, the rural-urban divide is also causing academic achievement gaps due to the importance of household registrations. With an expansion of higher education participation in China, both rural and urban students are able to gain access to universities. However, expansion means competition. Rural students are less favorable to prestigious universities because enrollment rates for these students dropped during the expansion (Yue, 2014; James, 2000). Quality of education is critical for students if they want to succeed in the college entrance exam, which largely determines where they will end up in college. Academic achievement gaps are affected by social capital and family capital. Factors such as demographics (urban and rural), family education levels, socioeconomic statuses, and many more influence students’ education outcomes and further enlarge the gaps.

2.1.1 Empirical Studies on Various Main Cities in China

The four major cities in China are Beijing, Shanghai, Guangzhou, and Shenzhen. Other contemporary main cities are mostly the capital city of each province. Some empirical studies have discussed education inequalities based on that specific area. It is valuable to look into these areas as there are common trends. An empirical study by Scholar Wang is done in the context of Shanghai. Shanghai is a significant city in China; with its modernization and outstanding

resources, it has attracted many migrant families to come for the purpose of their children's education. When looking at academic achievements in college, one must first understand the schooling experiences before college for fundamental reasons why some students end up in non-Project 985 and 211 schools. In comparison to the Shanghai model, Wang also collected data from Suzhou and small rural areas of Anhui Province (Wang et al., 2017). This empirical study shows that the quality of teachers, administrators, and facilities contributes to poor academic performances for migrant students. Wang shows that migrant schools in Shanghai and Suzhou are delivering worse education quality compared to rural public schools in Anhui. This indicates that migrant students have a more significant achievement gap than students who stay in rural areas. This outcome of migrant students performing worse in large cities can be caused by parents' inability to send their students to better public schools in Shanghai. In China, migrant students who want to access better quality education usually choose to attend public schools that are government-funded (Wang et al., 2017). However, in order to do so, they have to double, sometimes triple, the fees, such as temporary student fees, because they have no local registration (Jin et al., 2017).

A similar study was done in Shenzhen, which is another city highly occupied by rural migrants. A study by Scholar Jin shows that migrant students in Shenzhen also experience difficulties because the schools are divided into more types. Migrant families usually have low socioeconomic backgrounds, and unequal education resources are more intense in Shenzhen as the city has a higher proportion of migrants. The Shenzhen study proves that social statuses are inheritable as Jin points out that "This unequal allocation of educational resources would reduce the social upward mobility of rural migrants, the poverty would be passed from rural migrants to the next generation, and the social hierarchical system would be increasingly consolidated" (Jin et al., 2017, p. 179). The Shenzhen study reveals that education opportunities are still unequal even when migrants come to major cities hoping for a better chance of getting into top universities. The truth is that class levels and family support are still key to obtaining resources. The same issue is also happening in Nanjing City, Jiangsu Province, where family capital has a significant impact on higher education attainments (Liu &Yao, 2015). Family locations and parents' education level impact the students' college levels. Scholars Liu and Yao show that parents who have a bachelor's degree from Project 985 and 211 schools, their students are 1.081 times more likely to get into Project 985 and 211 schools (Liu &Yao, 2015). The significant

difference is caused by family capital, and migrants/rural families usually lack the support of their children.

2.2 Theoretical Frameworks

This section looks into the study's two main theoretical frameworks: social capital theory and family capital theory. This study uses these two main theoretical frameworks and their sub-concepts to guide the development of its hypothesis and explain research findings.

2.2.1 Social Capital Theory

Social capital theory has been a popular theory when talking about education inequalities. Scholar Lin gives a simple definition for social capital, which is "individuals engage in interactions and networking in order to produce profits". The theory is viewed as how people use their network of relationships to benefit themselves in achieving their goals and creating a better outcome (Lin, 1999, p. 31). Humans constantly interact with others, and society cannot survive in isolation. Social capital theory is built upon the idea that resources shared within the relationships will have better returns. Different theorists have different approaches to the social capital theory. The main theories include Pierre Bourdieu, James Coleman, and Robert Putnam, who all contributed to the social capital debate. They view social capital from various approaches. This section will focus on the former two theorists, Coleman and Bourdieu, who mainly examine social inequalities and education achievements. Their views are critical to the study as they value social capital in contractive ways while also sharing some similarities. This section analyzes Coleman and Bourdieu's approaches rather than Robert Putnam's ideology because Putnam developed his theory based on Coleman's approach. Therefore, focusing on Coleman and Bourdieu's social capital theory approaches is enough in this case.

2.2.2 James Coleman's Approach

Coleman's view on social capital is from a collective angle. He believes people benefit from social capital if shared within the groups. He acknowledges social networks through family connections (Coleman, 1988). Coleman argues that social capital and family social capital (also known as social capital within the family) correspond to each other (Field, 2008; Coleman, 1988). He genuinely thinks that collective networks bonded within the family and community can increase the benefits of each person. Coleman presents this ideology by using an example of the famous diamond market. He indicates that the diamond market is operated by a close community of Jewish people, not by a single merchant. The market functions based on a free

exchange for stone inspection, and if any of the merchants fail to be honest, the close tie will be broken. Then, the broken tie will result in the market being unable to operate and obtain its current efficiency. This example shows that "these close ties, through family, community, and religious affiliation, provide the insurance that is necessary to facilitate the transactions in the market" (Coleman, 1988). Coleman emphasizes social capital through family relations, and in his own research, he preliminary examines underprivileged students and their family/community structures. He believes that parents are responsible for the involvement of their children's social capital development and uses these social connections for their children's advancement (Coleman, 1992; Dika & Singh, 2002). Educational achievement is strongly associated with Coleman's theory on social capital. His research on high school achievement gaps between public, private, and catholic schools shows that catholic schools have the lowest student dropout rates not because of their religious backgrounds. Instead, it is correlated with a well-built community of adults (parents and teachers) and students (Coleman & Hoffer, 1987; Rogosic & Baranovic, 2016). Coleman believes that social capital should be well-embedded in the form of communities. Therefore, this current study will incorporate his ideology as one of the theoretical frameworks and look closely into students' family relationships to understand the effect of social capital on educational achievements.

2.2.3 Sub-theory: Social Networks

As a sub-component of social capital theory, social networks become essential in understanding how people exchange resources and information to achieve their goals. As social networks are a part of the social capital theory in Coleman's ideology, he mentions that networks are embedded in social capital as he focuses on "the relationships of individuals across the network" (Stone, 2018). In addition to Coleman, Lin indicates that social capital and social networks are planted within each other by saying that "... individuals access and use resources embedded in social networks to gain returns in instrumental actions or preserve gains in expressive actions" (Lin, 1999, p. 31). It is impossible to only talk about social capital without mentioning social networks as they compromise each other. Social networks can be applied to individuals and a community because individuals can yield returns for the group as information moves around more effortlessly and generates greater profits (Lin, 1999). For example, Scholar Lin talks about how information and resources are being "borrowed" from one person to another. Such "borrowing" information can be shown through one person using his/her networks to help

his/her friends to find a job. At the end of the day, this job information is still the property of that person, and his/her friends are only "borrowing" their social networks for their benefit (Lin, 1999, p. 468). Such illustration indicates that information is the foundation of social networks and social capital. Coleman presents a similar approach in his ideology called "information channels" (Coleman, 1988; Coleman, 1990). Information Channels mean that people use relationships and networks as a source to obtain information and also to keep them up-to-date (Coleman, 1988). Information brings benefits to the receiver while also giving returns to the senders. Coleman gives an example of how leaders/employers collect information for their own benefit. They are more likely to maintain or uphold their position because their information "receivers", such as employees or co-workers, will most likely repay them with gratitude and hard work (Coleman, 1990). Social networks create a tie in the community and create prosperity for each individual. These examples indicate that the more social networks one has, the more advantages he/she is able to obtain through these community connections. Social networks consolidate the present study, and by accessing Chinese college students' social network connections, either with their peers or with adults, researchers are able to understand the connections between social capital, educational inequalities, and achievement gaps.

2.2.4 Pierre Bourdieu's Approach

Unlike Coleman's approach to social capital from a collaborative point of view, Bourdieu takes social capital from the individual perspective. Bourdieu focuses on individuals' networks and reproductions of social inequalities as his main ideology of social capital (Grossman, 2013). Bourdieu's interpretation of social capital theory includes four forms of capital: social, economic, cultural, and symbolic. Bourdieu refers to social capital as one's social status, economic capital as the financial status, cultural capital as cultural goods and education qualifications of individuals as well as family members, and symbolic capital as one's reputation productions (Bourdieu, 1986; Ihlen, 2018). All of these capitals significantly contribute to producing educational inequalities in Bourdieu's ideology; however, this section will continue to focus on the social capital, economic capital, and cultural capital components as the current study looks into students' socioeconomic status, family income, and education resources. Bourdieu argues that economic capital is the root of social capital by indicating how some people are able to obtain goods and resources without additional costs through economic capital while, in contrast, others have to access them through social agreements (Bourdieu, 1986). This means that people

with more economic capital are more likely to obtain the other three capitals than others. Bourdieu's view on social capital is significantly more concentrated on individualism. He believes that even though social capital is attached to class stratification, each individual's effort to create durable networks is worth noting (Claridge, 2018). However, Bourdieu also insists that these social connections are only durable in middle and upper classes to ensure "their spheres remain exclusive" (Gauntlett, 2011). His ideology on social capital gives insights into the current study as the study looks into the unequal distribution of resources obtained by different classes. Besides Coleman's idea of how social capital is emphasized in family relationships, Bourdieu separates this view into cultural capital (Rogosic & Baranovic, 2016). Therefore, this study also integrates Bourdieu's cultural capital ideology of long-term contribution to cultural goods while understanding the overall effect of social capital on students.

2.2.5 Sub-theory: Social Mobility

Social mobility is a sub-theory generated from Bourdieu's concept of social space. Social mobility refers to the movements of people from different socioeconomic statuses, and it is often more applicable to the low-socioeconomic group as they travel upwards through education, skills, work opportunities, and many other factors (Galiani, 2008; Behrman, 2000). Bourdieu indicates that social space is closely related to social hierarchies as "some people have more privileges associated with mobility than others". Bourdieu believes that inequalities are associated with social spaces as more people will have the same habitus and stay in the same social position (Reed-Danahay, 2020, p. 9). Therefore, increasing social mobility for people of low socioeconomic class is much more challenging as they are at the bottom of the social hierarchy. The most effective way for them to increase their social position is through education. In fact, education is significantly associated with social mobility as "education has become an increasingly important factor in determining which job people enter and in determining their social class position (Iannelli & Paterson, 2005). Education is always known as "the entry ticket to a better life" in Chinese society. Much research has shown the idea that people from upper or more advanced social classes often have a better education background and more advantages in the labor market due to their social statuses (Iannelli & Paterson, 2005; Shavit & Blossfeld, 1993). This claim can also be a possible factor that contributed to the increased rate of higher education participation around the globe. Education inequalities are still happening even when the higher education participation rate has increased in recent years. Social mobility is still

affecting academic achievement among students from the low socioeconomic class. There is a common trend of social mobility happening in many countries, which shows that socioeconomic status is "inheritable" because "those who are born poor are more likely to stay poor and those who inherit privilege are more likely to pass on privilege" (Lenon, 2020, p. 112; Hurst, 2012). Social mobility is understood as part of the concepts of social capital because people from less advantaged backgrounds are more likely to reproduce inequalities, according to Bourdieu, as social statuses are "inheritable". This present study will look at education inequalities in China through the social mobility lens.

2.2.6 Family Capital Theory

Family capital is one of the most influential factors causing achievement gaps in China. The concept of family capital emerged from both Bourdieu and Coleman and was adapted by many other scholars to supplement the social capital theory. On the one hand, Bourdieu includes individual and family contributions as cultural capital, and he discusses its connection with the other two: economic and social capital (You et al., 2022). On the other hand, Coleman generalizes family capital by including "human capital, financial capital, and social capital" (Jin et al., 2017, p. 171). Both scholars have some overlapping points of view; therefore, this current study will look into how family capital can affect students' academic achievements from the economic/financial, and social aspects. Family economic capital refers to "the family annual income and inherent assets" and family financial capital indicates "the physical and material resources available to the family, typically measured as the family's total household income" (Zhao et al., 2023, p. 2; Jin et al., 2017, p. 171; Coleman, 1988). In general, this study will examine the family's economic and financial capital, the annual income levels of the family, and the amount of wealth the parents are willing to spend on their children academically. The study will also look at the family social capital, which means it will measure the family social status and the connections between parents/family members and students both academically and socially (Zhao et al., 2023). Family social capital is closely related to family social networks, which means that the more social networks the family has, the more their students are likely to have high achievements in school and the workplace. Family capital is critical in understanding achievement gaps in China as China has consistently placed more weight on family relations than individuals' relationships (Liu & Gao, 2015). It is generally understood that family capital

plays an essential role in the quality of education in Chinese society, as it further explains the causes of education achievement gaps in Chinese higher education.

2.2.7 Hukou: An Example to Demonstrate Social Capital and Family Capital in China

Hukou means household registration, which is critical when discussing the effects of social and family capital on Chinese students. According to the Organization for Research on China and Asia, *Hukou* represents family capital for students before and during the phase of higher education. It is also an illustration of their social capital after that. *Hukou* is a system where everyone must register for residency based on their family's location. Registering for *a hukou* means that the person will become a resident of that area, which is usually inherited from the parents. However, people can change their residency through education and jobs if they qualify through the local *hukou* policy. *Hukou* demonstrates one's social status because one can become socially mobile and increase his or her social status by moving his or her *hukou* to major cities (Sasianandkumar, 2023). Before and during college, *hukou* is one of the factors of family capital and can cause education inequalities due to its location. Chinese scholars, such as Scholars Zhu and Luo, emphasize that family background factors, including the father's occupation, family socioeconomic status, and parents' education levels, all contribute to education inequalities in China (Zhu & Luo, 2022). Therefore, to better understand the causes of achievement gaps in Chinese students, this section will further examine family capital in the Chinese context through the lens of individual family differences and the unique Chinese education system. The Chinese education system is a particular case when discussing education achievement gaps. The Chinese education system is divided into two critical stages: elementary to middle school and high school to college. The stage from elementary school to middle school is known as the mandatory stage, as all students are required to attend the schools that are closest to their *hukou*. One difference in receiving quality education is between a rural *hukou* and an urban *hukou*. It is commonly known to many Chinese people that *hukou* plays a significant role in determining where their children will go to school during the mandatory stage. The closer the *hukou* is to the major cities, the better the chances are for the students to end up in top universities. *Hukou* is one factor contributing to family capital as more educational resources are usually given to students from larger cities because *hukou* is closely associated with the family's socioeconomic status. It is obvious that children from rural areas are less likely to succeed compared to those who have an urban *hukou*. The *hukou* system benefits "urban (nonagricultural) residents and discriminates

against rural (agricultural) residents in resource allocation" and causes education inequalities (Jin et al., 2017, p. 170; Afridi et al., 2012). Scholars Afridi, Li, and Ren discuss that *hukou* is inheritable, and many rural residents' educational opportunities continue to be impacted by their birthplace and family origins (Afridi et al., 2012). The *hukou* system is an exceptional and critical example of Chinese society's socioeconomic system and family social capital, which must be addressed when discussing the capital impacts.

2.3 Adoption from Both Theories

As both theorists have some similar ideas in their theories, this study will take Coleman's approach to social capital and its sub-theory of social networks through family and close communities while also integrating Bourdieu's social capital theory on class stratification and social mobility to understand the social inequality that is happening in the Chinese society. The study discusses the impacts of family interactions and their social networks on students' academic achievements. Essentially, it discovers the role of family plays in students' education and how different capitals affect the outcome. In other words, this study further looks into the influences of economic/financial capital on their families and if this form of capital will make a difference academically. The study also examines students' achievements from social perspectives and investigates the effects of individual social networks with their friends and peers. In addition, this study will examine the non-project university students' attitudes and opinions toward Project 985 and 211 universities and find out how to close the gap between the students from these schools and the non-project institutions. Lastly, the study explores *hukou* and whether the locations can play a role in contributing to education inequalities by connecting this concept back to the family capital and social capital concepts. The two theories, social capital theory and family capital theory, are significant steps in understanding the possible ways of closing the achievement gaps in the Chinese higher education system.

2.4 Summary

This literature review section suggests that social capital and family capital all play an influential role in determining the students' higher education institution levels. Non-project institutions will likely have more rural and migrant students because of the lack of education resources and more significant achievement gaps. Empirical studies prove that *hukou* locations are essential for the students' compulsory education. Larger cities mean more opportunities, yet these opportunities and resources are labeled with a price. By investigating the possible causes of

the current situation in the Chinese higher education system, educators are able to create possible policies that can benefit students from less advantaged backgrounds.

Chapter 3: Methodology

This research uses a unique method: mixed methods. Quantitative and qualitative data were collected and analyzed to understand the study's aims and related aspects. Quantitative data (a survey) was used to analyze participants' background information and positions, while qualitative data (semi-structured interviews) was collected to hear people's stories in more detail (Brikci & Green, 2007, p. 3). This chapter first explains the paradigm involved in this mixed methods study. Then, research designs are introduced and followed up with data collection methods. Lastly, this chapter mentions the data analysis plan, acknowledges ethics and the researcher's positionality, and points out some limitations. Together, this chapter establishes a rigorous and detailed methodological approach to this study.

3.1 Philosophical Stance

Mixed methods research is starting to gain popularity over the last few decades. Mixed methods refer to combining both quantitative and qualitative data, and sometimes two or more methods are used in a single research study (Hall, 2013; Greene, 2006). Identifying philosophical stances in social study research is critical as paradigms are able to help researchers understand the construction of the world through human experiences (Kuhn, 1962). By understanding and applying different paradigms to the research, researchers can verify the legitimacy of their chosen methods and frame how they interpret truths. Paradigms are viewed as a framework for the study as its methodological approach is based on these philosophical stances. According to Scholar Hall, there are three ways to adopt paradigms for mixed method research: "a-paradigmatic stance, the multiple paradigm stance, and the single paradigm stance" (Hall, 2013, p. 5). Scholar Hall points out that it is difficult to identify specific paradigms for mixed methods because they include both quantitative and qualitative methods, and sometimes paradigms that are suitable for either method might contradict each other. For example, positivism and postpositivism are more suitable with quantitative methodologies, while constructivism is associated with qualitative research. Therefore, mixing positivism and constructivism might cause contradictory issues as these paradigms have different ontologies and epistemologies. Accordingly, Scholar Hall suggests that the more suitable paradigm for mixed methods is the single paradigm stance (Hall, 2013). Pragmatism has become one of the popular choices for mixed methods. To avoid contradictory assumptions, this current study uses the single paradigm stance and adopts pragmatism as its parametric approach. Pragmatism is

identified as “a compromise between empiricism (knowledge is derived from sensory experience) and rationalism (knowledge is derived from logical and deductive reason)”, which simply means that pragmatism is using “all necessary approaches to to understand research problem” (Moon & Blackman, 2014). This unique characteristic makes pragmatism suitable for mixed method research because it allows the researcher to establish a holistic evaluation and include other possible factors in this study. Pragmatism has guided the research methodology. In considering pragmatism as the methodological framework, the best way to understand reality and the construction of knowledge is through examining real-world problems, which means in this study, quantitative data is used to measure individual background differences, and qualitative data is to analyze participant’s experiences and beliefs.

3.2 Research Methods

Taking pragmatism into account when choosing a suitable method to examine inequalities among Chinese higher education students, mixed methods become a sufficient option. Mixed methods include two parts. The first part was analyzed using descriptive statistics, while the rest of the survey was analyzed using correlation. This current study chose to use the explanatory sequential design. According to Scholars Merriam and Tisdell, the explanatory sequential design means that “the quantitative data are collected first; the collection of the qualitative data follows, generally with the purpose of explaining the results or a particular part of the findings in more depth” (Merriam & Tisdell, 2016, p. 47). This type of mixed method was frequently used in social science studies and the field of education, and this study employed such a strategy. This strategy means that this study analyzes the quantitative data first and then uses the results to generate the follow-up interview questions. This research aims to examine the effects of social networks and family influences on Chinese college students; therefore, it becomes essential to first understand if different social statuses have impacted students’ academic achievements. Since social statuses are usually demonstrated in relation to family incomes and demographics, the quantitative method is a suitable choice for collecting numerical data. The survey questions were designed to compromise such needs. Survey questions came mainly from the empirical studies in Chapter 2. Some empirical studies examined the effects of family capital, and others examined the influences of social capital on students. Therefore, this survey combined both theories into one complete survey, with one section focused on social capital and another concentrated on family capital. For example, questions regarding after-school classes came from

the Shenzhen study (Jin et al., 2017). Questions examined social networks came from multiple studies (Liu & Gao, 2015; Mamas, 2018). Surveys are also a typical example of choice when the research requires to "gather numerical data and generalize it across groups of people" (Almalki, 2016). A survey became a convenient choice for collecting data across China from both northern and southern, including remote areas. Since the diversity of participants in this study requires a wide range, using a survey first to gather basic information becomes necessary. Quantitative methods, such as online surveys, allowed data to be collected from a wide range of participants. Digital methods were advantageous when it came to collecting information from a concentrated group of people (Wright, 2017). The survey was administered online, and it collected fifty-four survey responses from the northern, southern, and remote areas. Eight representatives were selected from the pool to conduct interviews. Since this study also requires the participants to be students who either are currently undergraduate students or have earned an undergraduate degree from non-Project 985 and 211 universities in China, the online survey is an efficient tool when reaching out to this population of students. Without the help of the internet, it would have been difficult to examine a large number of students from this category because sample sizes might have been smaller as the participants were located in various areas across China.

After collecting survey responses, the study followed up with semi-structured interviews. The semi-structured interview was chosen because of the benefits it would bring to the study. Semi-structured interviews offered detailed insights from participants' experiences and their stories through a set of open-ended questions. This type of interview was more of a conversation between the researcher and the participants rather than a formal meeting (Ruslin et al., 2022). This form of interaction allowed me to have a structured or preset of questions while still being able to engage in the conversations. With these interviews, the study was able to investigate participants' individual values and beliefs, which were difficult to measure statistically (Almalki, 2016; Denzin & Lincoln, 2005). The opinions and responses of these eight interview participants were recorded for more in-depth thematic analysis. By combining quantitative and qualitative methods, this research collected data from a well-rounded point of view and enhanced validity.

Mixed methods were chosen for this study because of the benefits this approach brought to the study, and this method fulfilled the study's unique aims. Some prominent benefits of using mixed methods in this research included that both methods compromised each other, provided a comprehensive understanding, and answered the research question when one method could not

(Guest & Fleming, 2015, p. 582). With most of the workload on qualitative data, the quantitative data sets were only analyzed using descriptives and correlation strategies. Moreover, the qualitative data were analyzed in depth and coded with various themes. In this way, mixed methods become doable with more emphasis on one method than both. The survey was sent out a month before scheduling the interview sections to avoid any time conflicts between both parties. The participants who participated in the interviews were informed and planned the dates according to their schedules and flexibility. I was able to work around the participants' schedules to make sure that they were able to complete both phrases. Detailed explanations and analysis on both phrases can be found in the 3.4 Data Analysis section.

3.2.1 Sampling Process

Since I did not fit into the category requirement of this study, all the participants were recruited through social media platforms, such as WeChat and Instagram. The survey was sent out beforehand as a social media post, and whoever was interested in the upcoming interview was able to leave their social media IDs so I could reach out to them. All interview participants were selected upon completing the survey, and all potential interviewees were required to be either current undergraduate students or recent graduates from non-Project 985 and 211 universities in China. All participants were required to be above the age of eighteen and had no apparent disabilities. All genders were welcomed in this study; however, the ratio of male-to-female interview participants was one to seven because it was impossible to keep the number equal as the number of participants who were willing to conduct the study remained subjective.

3.3 Data Collection and Data Management

The data was collected through two phases: a survey and semi-structured interviews. The survey was first sent out to the public through social media platforms. The survey was signed to have thirty-eight questions and was divided into three parts. The first part examined participants' background information. The second and third parts measured the effects of social networks and family capital. The survey responses were collected online, and no personal identifications were revealed, as the participants were not asked to write down their names.

Upon completion of the survey, participants were invited to participate in the semi-structured interviews at a later stage. The interview participants were given the interview guide ahead of time, and new questions were allowed to be brought up during the process from

the participant's individual responses. In this way, semi-structured interviews allowed the researcher to have the freedom to tailor the questions based on the situations during the interviews (Ruslin et al., 2022; Lindlof & Taylor, 2002). Furthermore, the interviews also took place online since the study examines Chinese college students, and all of them were based in various locations in China. Conducting these interviews online became the most convenient way and allowed more flexibility for both the researcher and the participant. The researcher was able to adjust the schedule based on the participants. All participants only consented to have their voices recorded, and conducting the interview online best accommodated this request without recording their faces. The data collection process of combining a survey and an interview served the purpose of fulfilling the research aims and requirements.

For data management, the survey was administered through Microsoft Forms, and all the responses were recorded in an Excel sheet in the University OneDrive for security and confidentiality purposes. All the participants were guaranteed anonymity as no one questions on the survey or during the interview would ask them to give their names or other identifications. All participants had to consent or sign the consent form for the survey and interview. No personal identifications were revealed, and all interview participants were identified using numbers. All interview participants agreed to direct quotations as long as they were not identifiable and their names were mentioned. All online interviews took place on University Microsoft Teams, and I translated all recorded transcripts solely to ensure confidentiality. All original and translated transcripts were uploaded to the University OneDrive. The original audio recordings were deleted and destroyed completely right after finishing the transcripts. The 3.5 Ethical Considerations and Positionality section mentions additional information on ethical consideration approaches.

3.3.1 Pilot Study

To ensure validity and smooth performance, a pilot study was done for both the survey and the interview. Conducting a pilot study before the actual research study became essential to ensure the study had all the necessary components and its design was practical (Malmqvist et al., 2019). The survey was tested with one initial participant before posting it to the public, and she previewed all the questions. Minor changes to the wording of the statements were made, and the order of the questions was adjusted. A pilot interview was conducted to ensure that the interview questions were not too broad and that the participants were able to finish the interview within an

hour. The participant did not offer any suggestions for the interview questions; she believed they were reasonable to ask for the actual interview.

3.4 Data Analysis

Different types of mixed methods are interpreted differently in research studies. This section discusses the specific strategies for analyzing data sets from both quantitative and qualitative methods. A full list of the survey questions and interview questions is attached in Appendix 1.

3.4.1 Specific Steps of Analyzation

This current study adopted this methodology and analyzed its data in this sequence. First and foremost, the quantitative data was analyzed in two main sections and presented using descriptive and correlation analysis. The first section of the survey included the background information of the participants, such as demographics, genders, school types, household registration locations, and family information. All background information was measured using descriptive statistics to identify common patterns across the sample. The following section was analyzed using correlation analysis, focusing on social networks and family capital influences on students' academic achievements. In this section, the participants were asked to respond to the statements on a five-point Likert scale, ranging from strongly disagree to strongly agree. These statements examined the participants' opinions on whether or not the situation applied to them. For example, fifteen statements accessed social networks and family capital, and they were demonstrated, such as "My family will help me find a job or an internship" and "I believe the relationship with my class cohort will benefit me in the future." I manually screened all answers to ensure validity and avoid the participants quickly scanning the questions without carefully thinking fully before answering them. Participants who finished the survey in less than a minute were removed to ensure the accuracy of the results. After scanning their responses, these responses to these statements were analyzed through statistical software in the form of correlation. All the statements that show a significant positive or negative correlation were further examined and asked again in the interviews as part of the explanatory sequential design.

The following qualitative interview data was analyzed by using the thematic approach. Scholar Naeem states, "Thematic analysis is a research method used to identify and interpret patterns or themes in a data set; it often leads to new insights and understanding (Naeem et al., 2023, p. 2). This study used both inductive and deductive coding approaches. Deductive codes

were predetermined before the research took place, while inductive codes were generated from the data and were repeated terms used by the participants during the interviews (Linneberg & Korsgaard, 2019). This study first used deductive coding, which was generated from the survey results. The predetermined codes came from the significant correlation analysis and helped to form the interview questions. Some examples of the deductive codes were “social interactions”, “family supports”, “financial burdens” and many more. These codes formed some of the main interview questions and allowed the researcher to explore more of the participant’s individual experiences in more depth. I also looked for inductive codes from the transcripts. I looked for a few repeated phrases that appeared in the transcripts, such as “discrimination”, “school ranking”, and “interpersonal relationships”. Then, they were grouped as sub-themes or examples and discussed as part of the findings. Border themes were generated and interpreted through deductive and inductive codings to understand the research results better.

3.5 Ethical Considerations and Positionality of the Researcher

Ethical considerations are a critical step in the research process. To ensure the study follows all ethical protocols, this study obtained ethics approval from the Central University Research Ethics Committee (CUREC) and the Education Departmental Research Ethics Committee (DREC). The approval letter is attached in Appendix 2. All participants remained unidentified and anonymous in the survey and interview. The only exception was that interview participants’ names were signed on the consent forms; however, these forms were carefully kept in University OneDrive. Access to these forms was only given to my supervisor and me. To ensure all participants were well-informed before starting the study, a participant information sheet (Appendix 3) was given to the participants, and questions were asked to ensure they understood the process. Their privacy and confidentiality were well respected in this study. For the interview, the participants were each assigned a number, and they were referred to in the write-up by their numbers. No names or pseudonyms were used to protect their privacy. All interview participants had potential interview questions in advance and they could notify the researcher if they were uncomfortable answering any of the questions. Since the interview was semi-structured, more questions might be generated once the interview is in progress. All participants understood that they were able to stop the interview at any time without giving reasons. All questions, both the survey and the interview, were submitted and approved by CUREC and DREC.

Scholar Massound states, “Explaining one’s positionality allows a reader to understand how data were gathered, who agreed to talk to the researcher, and why they did so” (Massoud, 2022, p.s67). Positionality played a critical role in helping both the audience and me understand the reason for conducting this research and the role that the researcher played in the study. This current study was done in the context of Chinese higher education, in which I did not graduate from a Chinese university. However, I was familiar with the context as I grew up immersed in the culture. The study was conducted under such conditions because I had prior knowledge of Chinese higher education institutions, as some of my friends from childhood went to these schools. Since the survey was sent out through my private social media accounts, some of the participants were from my friend groups. Nonetheless, all participants were invited to complete the survey or the interview because they fit the requirements of the study. My position stood differently from that of the participants compared to someone they were not familiar with. I consider myself as “an insider” in the study. Being an “Insider” or an “outsider” meant whether or not the research was done in the researcher's own culture (Holmes, 2020). In this case, the study was conducted in Chinese with all Chinese participants, as I also speak Chinese. With such familiarity, it was beneficial because the participants were able to speak Chinese in the interview. They were able to express themselves in more depth than if they had to speak in English. Speaking the same language allowed the participants and myself to engage in the conversations in more depth without the worry of being unable to express themselves. However, the downside of being an insider was that “data might become thinner as a result” (Mercer, 2007). The participants might have skipped important information because they assumed I already knew this information. It was worth noting the researcher’s positionality in this study. To avoid presumptions, all survey and interview questions were pre-approved by my supervisor for a second-hand opinion in order to minimize pre-preferences in choosing the questions.

3.6 Limitations

Even though this study was conducted to fulfill the research aims and to benefit the community, we still had to consider its limitations. The first limitation is that since this research is done in a short amount of time, around three to four months, mixed methods require more work and take more effort to analyze results from both methods (Almalki, 2016). The second limitation of conducting mixed methods in this study is that the participants are unwilling to participate in both phases due to conflicting schedules (Almalki, 2016). Both of these limitations

that were related to the study's method selection were resolved by focusing more on the interview data analysis and planning ahead of time with participants. The third limitation was that online surveys could also cause sampling issues. Since the participants were taking the survey online, self-selection bias might occur if participants repeatedly selected the same answer, which altered the final analysis results (Nayak & Narayan, 2019). This could potentially affect the results when calculating for significance. The fourth limitation was that the sample size was too small for both the survey and the interview. The plan was to have around two hundred responses for the survey and twenty participants for the interview; nonetheless, the study ended up only having one-third of the participation rate, which caused the study to be less representative of the whole Chinese college student population. The final limitation was that the participants were mostly females, and interpreting male students' experiences became insufficient. The male-to-female ratio of the survey was four to six, while for the interview, it was only one to seven. This number was totally subjective as it fully depended on the willingness of the participants. However, this unbalanced sample size could affect the study by increasing the chance of false assumptions, and the sample size being too small could cause the results to be less generalizable. Therefore, making connections with the whole Chinese population becomes more challenging.

Chapter 4: Findings and Results

This chapter is presented in two main sections: the quantitative and qualitative findings. Each main section contains two sub-sections, which address social capital and family capital. Firstly, the quantitative findings are introduced in two ways: descriptive statistics for basic individual background information and correlations for examining the effects of these two capitals. Secondly, the qualitative findings are organized and discussed in answering the four overarching research questions. Collectively, by analyzing the findings, this study aims to answer the main research question and discover the potential causes of the achievement gap for Chinese college students.

4.1 Quantitative Findings

In this section, basic background information and correlation tests on family capital and social capital were analyzed in preparation for making connections to the qualitative data sets in the discussion section.

4.1.1 Descriptives Statistics: Background Information

Some basic background information was gathered from the survey. Fifty-four participants took the survey, and twenty-one of them were males, while the rest were females. Only one participant preferred not to say or identify the gender. The gender ratio of this study is roughly around four to six. Out of the fifty-four participants, they all went to non-Project 985 and 211 universities. A majority of them (57%) went to public universities in China, and the rest of them went to other different types of schools, such as vocational (9%), independent/Minban (11%), private (11%), Adult HEIs (4%), and others (7%). The highest grade point average (GPA) was 4.0, and twenty-six (48%) participants were in the 3.0 to 3.5 range. Fifteen of them (28%) had their GPA in the 3.5 to 4.0 range, while the rest (24%) were below 3.0. Out of these fifty-four participants, only six of them had a household registration, *hukou*, in the four major cities: Beijing, Shanghai, Guangzhou, and Shenzhen (See Chart 1). Thirty-one (57%) participants' *hukou* were located in southern cities, and fourteen (26%) of them were located in northern cities. Only a very small portion of participants (6%) were from remote areas. Thirty-four (63%) participants in these cities and areas had an urban *hukou*, while the rest (37%) had a rural *hukou*. This meant that the chance of participants who were holding an urban *hukou* while that *hukou* was also located in one of the four major cities was scattered. Most students chose to live in the cities where their *hukou* were located, but a few of them had moved to the four major cities for

various reasons. Eight participants were living in the four major cities, and ten of them lived in northern cities. Most participants, thirty-four of them, lived in southern cities, and only two participants lived in remote areas. The background information helps to understand a general trend and makes connections to the interview analysis at a later stage.

4.1.2 Descriptives Statistics: Family Capital

The "family capital" section assesses family relations, financial situations, and support offered by family members and their communities. In the survey, family capital first examines parents' *hukou*, education levels, and their employability. The result showed that all participants' parents, both fathers and mothers, had the same *hukou* locations (See Chart 2). For example, fifteen (28%) participants indicated that their parents all had a northern city *hukou*, and twenty-nine (54%) participants stated that their parents held a southern city *hukou*. Only six (11%) participants selected the four major cities and indicated that their parents' *hukou* were located there. Four (6%) participants' parents' *hukou* were located in remote areas in China.

Parents' education levels were critical in examining family capital (See Charts 3 & 4). According to previous empirical studies, family socioeconomic status was measured by parents' educational levels and household incomes (Chen et al., 2021; Matthew & Gallo, 2011). Thus, it became critical for this study to examine parents' education levels and household incomes as an indicator of socioeconomic statuses, and examining the sibling factor also became critical as previous studies showed that families who had more children tend to have a lower per capita income (Chyi & Zhou, 2014; Jin et al., 2017). Half of the parents only had a secondary school diploma, meaning that they had never graduated from a higher education institution. Nineteen (35%) participants indicated that their fathers had graduated from a higher education institution and fifteen (28%) of their mothers were also a higher education graduate. Nine (17%) participants' fathers and twelve (22%) mothers were elementary school graduates. The majority, thrifty-five (65%) participants, came from households having one to three siblings. Seventeen (31%) of them had no siblings, and only two (4%) had more than three siblings. For family employability, most fathers (78%) and mothers (64%) were working, while the rest of them were unemployed or retired. The average family annual income for most families (39%) was around 100,000 to 300,000 Chinese yuan[3]. Twenty (37%) families had an annual income of less than

[3] The currency exchange rate for Chinese yuan to British pound is around 0.11, meaning that for every one Chinese yuan is worth 0.11 British pounds.

100,000 Chinese yuan. Eight (15%) participants selected their households' annual income from 300,000 to 500,000 yuan, and only five (9%) participants' annual incomes were above 500,000 yuan. Most participants' families were earning less than 32,000 pounds per year. To visualize these findings, according to the National Bureau of Statistics of China, "In 2023, … the per capita disposable income[4] of urban residents was 51,821 yuan…and the per capita disposable income of rural residents was 21,691 yuan" (2024). The statistics showed that it is possible that an urban family of three had an average household annual income of 150,000 yuan while a rural family of three only earned around 60,000 yuan per year. Chong explained that the line for the middle class and above is each person earning more than 100,000 yuan per year because below this number people did not need to pay personal taxes (Chong, 2024). Therefore, the majority of the households in this study could potentially be from the middle class and below.

Another indicator of family financial support was pocket money, which was a way to demonstrate family's financial abilities and attitudes toward education expenses (Jin et al., 2017, p. 183; Shah et al., 2012). Forty-four (81%) participants had pocket money before college, and most of them (43%) received an amount in the range of 100 to 500 yuan.

Spending extra money and taking after-school classes were also indicators of family education and financial support as part of showing the family economic capital (Jin et al., 2017). Thirty-seven (69%) participants selected 'yes' to taking after-school classes since elementary school. The ratio of humanities and STEM subjects was fairly equal. As coursework got heavier and more challenging, parents' help with academics became less common. Therefore, allowing students to spend extra money and take after-school classes showed the family's financial strength, family social capital, and an alternative form of educational support. These descriptive statistics findings can further help interpret qualitative data and together assist in understanding some patterns across various areas in China.

[4] Disposable income of Residents refers to the sum of final consumption expenditure and savings that residents can use, that is, the income that residents can use for free disposal, including both cash income and physical income. According to the source of income, disposable income includes income from wages and salaries, net business income, net income from properties and net income from transfer (The National Bureau of Statistics of China, 2024).

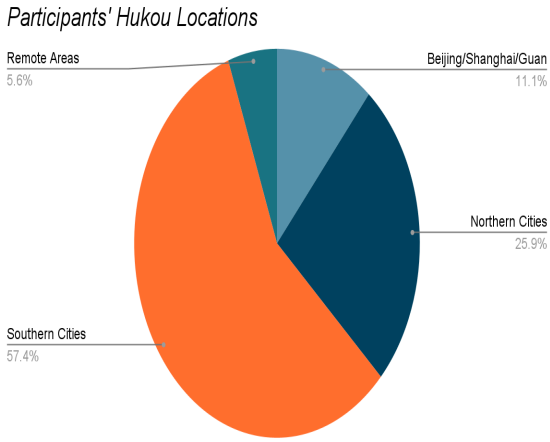

Chart 1. Participants' *Hukou* Locations

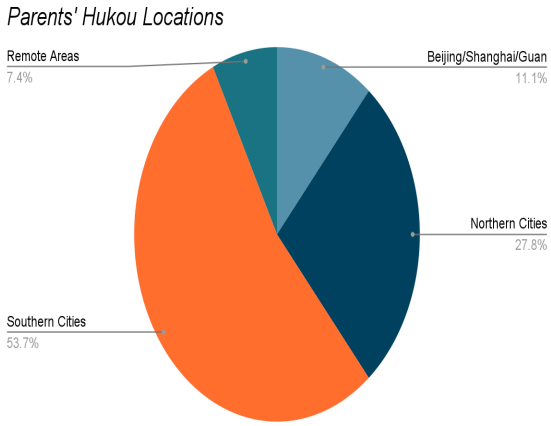

Chart 2. Parents' *Hukou* Locations

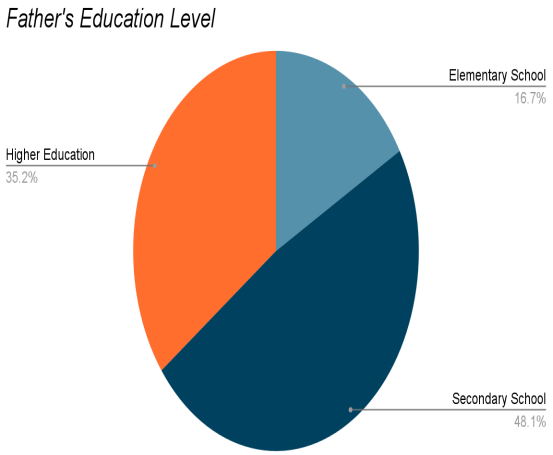

Chart 3. Father's Education Level

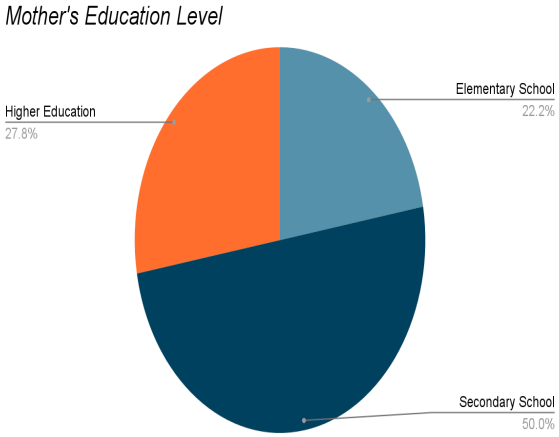

Chart 4. Mother's Education Level

4.1.3 Correlation Findings: Family Capital, Social Capital and Social Networks

The "family capital" theme can also be understood through the correlation test. Since this study uses the explanatory sequential design, the correlation tests only look for results that have either a positive or negative linear relationship. Each variable was calculated with one another, such as Variable 1: "family's attitudes toward school-related purchases" was calculated with Variable 2: "family higher education desires" using correlation, and so on. These significant results were used to generate the interview questions and were asked again during the interview process. Therefore, family capital was demonstrated by using the following measures (see Table

1). All the measurements were selected from literature and empirical studies. For example, family financial capital was measured by examining family attitudes on school-related spending and support, while family social capital was measured by their attitudes toward academic performances and school work assistance (Liu & Gao, 2015; Gao et al., 2015; Jin et al., 2017). Measurements such as "family's attitudes toward school-related purchases," "family higher education desires," "family care for student's academic performances," and "family's financial support after graduation," all showed positive correlations. "Family's attitudes toward school-related purchases" and "family higher education desires" had a strong positive relationship. "Family care for student's academic performances" and "family's financial support after graduation" had a moderate to weak positive relationship. These significant measurements were revisited during the interview, and participants were asked to elaborate on their opinions and past experiences.

The correlation test results also showed a significant relationship between social capital and social networks (see Table 2). Five measurements had either positive or negative linear relationships, which were "family helps on internships and jobs", "help from relatives", "relationship with class cohort", "working in groups on academic projects", and "help from alumni for internships and jobs". "Family helps on internships and jobs", "help from relatives", "relationship with class cohort", and "help from alumni for internships and jobs" all had a weak positive correlation, while "working in groups on academic projects" had a weak negative correlation. These measurements were mainly used to calculate the effects of social networks on students' academic achievements and were later examined again during the interviews. These measurements indicated the importances of family support and participants' view on the effect of social networks on themselves. These significant results indicated the effects of participants' family capital, social capital, and social networks had on their education career journey and whether or not these forms of capitals affected the type of college they attended or influenced them academically.

Table 1. Correlation between family capital and family support

Measure (Pearson's r/ p-value)	1	2	3	4	5	6
1. *School related purchases*	– –					
2. Higher education desires	0.733 < .001	– –				
3. Care for academic performances	0.605 < .001	0.738 < .001	– –			
4. Pursue a higher degree	0.049 0.692	0.144 0.246	0.240 0.051	– –		
5. Confidence in findings a job	0.049 0.692	0.119 0.336	-0.039 0.753	-0.016 0.896	– –	
6. Financial support after graduation	0.289 0.018	0.264 0.031	0.238 0.052	0.201 0.103	-0.006 0.959	– –

4.2 Qualitative Findings

In this section, a deeper analysis is done using thematic analysis to answer the four overarching research questions. Most interview questions came from the correlation tests and were identified as predetermined codes for the deductive coding approach. For example, the interview question "What were your parents' attitudes when spending money on school-related expenses, such as after-school programs or extra worksheets? Have they ever complained about the prices of these expenses?" was generated from the positive measurement "family's attitudes toward school-related purchases." Inductive codes were generated from the repeated interview responses, such as "discrimination", "school ranking", and "interpersonal relationships", which further served to support thematic findings. This section aims to provide a combination of findings on how social capital and family capital affect the participants' academic achievements in college.

4.2.1 Thematic Analysis: Effects of Family Financial Capital on Participants' Education Outcomes

To find out more about whether family financial capital played a role in determining the type of higher education institutions (Project 985 and 211 universities or non-projected universities) these participants ended up attending, participants were asked to share their experiences with financial support from parents and family since growing up. The results showed that most parents of non-project university students were strict about educational expenses since growing up, and these parents followed the "norms" to send their students to take after-school classes on school-related subjects, which resulted in their students having no other choices but only attending non-project universities. The reasons behind such actions of still sending their students to after-school classes but still not reaching their goals of getting into Project 985 and 211 universities could potentially be because students who got into Project 985 and 211 universities did not rely solely on these after-school lessons. They had other ways of getting into these universities, such as through special programs or their socioeconomic level, which provided extensive education resources since growing up. Therefore, the after-school classes were not the only way for them to obtain knowledge, as they could access resources differently.

In order to discover more if financial capital affects students academically, the participants were asked to indicate if they received any pocket money before college, living expenses during college, and any financial support after college. All eight participants shared that they had pocket money growing up, and the amount varied from family to family. A few participants indicated that they only had a few yuan, while the others shared that they had a range of a couple hundred to a thousand yuan every month. The amount of pocket money was highly dependent on their family income during that time. Five out of eight (63%) participants indicated spending their pocket money mainly on food and snacks after school. Three (38%) participants mentioned buying books or school-related supplies with their pocket money. All of them indicated that they spent their money carefully, but three participants stated that their parents were strict and made sure they did not spend their pocket money on miscellaneous items. The rest of them expressed that their parents had them fully control their pocket money for educational purposes, such as learning how to manage their money. All participants stated that their pocket money was turned into living expenses during college. There was no longer a concept called pocket money, but parents were giving them a few thousand yuan each month to live in colleges. The amount of

their living expenses varied, and five participants took part-time jobs during college to cover extra expenses. Their parents did not give them extra money besides their monthly allowances. The rest of the participants indicated that they were able to ask their parents for more if they used all of their living expenses. Three participants thought their family might still offer financial support after graduating college, while the rest believed they were on their own once they started receiving paychecks.

Furthermore, family financial support not only demonstrated the amount of money the participants received from their parents. Parents' attitudes toward taking after-school classes can determine family financial support. A majority, six out of eight (75%) participants, took after-school lessons prior to college. Many of the participants stated that they look after school classes for extra help on school-related subjects. However, many participants shared that these classes did not help them with their scores; they only did so upon their parents' wishes, and they still placed extra financial burdens on the family. Out of eight participants, only two participants shared that they also took after-school classes for interest-related subjects, such as dance, arts, and robotics. On the one hand, most of the parents were supportive even though these classes were expensive to them. For example, according to Participant 1, since her major required extra school classes for extra help that she could not receive from learning from her school teachers, her family had to spend an extra amount of money to hire a private tutor. She expressed that in order for her to achieve a high score in the class, she spent three to four days after school with her private tutor. She shared that "even though they (after-school classes) were quite expensive, my parents think this is a necessary expense because if everyone goes to take these classes, those who do not will have no chance in the competition". Incense competition forced most students to take extra classes after school. Even though these classes might cost them a fortune, many parents were more concerned about their students falling behind. Another participant, Participant 4, indicated the same idea. He shared "Although I think that they were useless because everyone was taking these lessons, my parents also required me to attend it. I did not like it. It was not cheap". Parents were willing to spend money on education-related items, typically seen in after-school classes for school-related subjects, to help their students with the college entrance exam. On the other hand, one participant believed that these after-school classes helped to take another route on the college entrance exam. Students were able to take extra classes for non-school-related subjects, such as music, arts, and debate, to reduce the requirement of the

scores when applying to colleges. Participant 5 shared, “I feel like after attending these after-school lessons, I do think it influenced my career choice the most because I took these

Table 2. Correlation between social capital and social networks

Measure (Pearson’s r/ p-value)	1	2	3	4	5	6	7	8
1. Family helps on Internships/jobs	– –							
2. Help from relatives throughout education career	0.256 0.037	– –						
3. Relationship with class cohort	0.292 0.017	0.215 0.080	– –					
4. Working in groups on academic projects	-0.251 0.041	0.016 0.899	0.027 0.829	– –				
5. Project 985/211 universities have more social networks	-0.130 0.293	-0.106 0.394	0.081 0.515	0.412 < .001	– –			
6. Social relationships are beneficial in workforces	0.167 0.176	0.224 0.068	0.386 0.001	0.122 0.326	0.128 0.303	– –		
7. Social connections is beneficial	0.143 0.250	0.058 0.642	0.266 0.029	0.181 0.142	0.025 0.844	0.500 < .001	– –	
8. Help from alumni for internships/jobs	0.328 0.007	0.168 0.175	0.027 0.828	0.093 0.455	-0.003 0.983	0.186 0.133	0.266 0.030	– –

music and orchestra lessons, and it gave me directions to choose music-related majors during college. Also, I earned bonus points during the college entrance exam. It helped me deduce many points for the exam”. She went through the talent program and got into her school by playing in the orchestra to win awards. She indicated that she would not be able to have these achievements if her parents were not supportive and spent money on these classes; however, she also shared

that her parents had complained about how expensive these classes were and expected her to earn good grades in return.

Parents' attitudes toward taking after-school classes are not only shown in their actions but also their mindsets. All participants indicated that their parents were willing to spend money on education, but three participants stated that their parents would complain about the expense of this extra spending. Participant 4 shared, "As for other things, for entertainment purposes, such as spending money on games, they will never allow their money to be used that way". Due to the competitiveness of the current education environment, parents were willing to support their students for education-related expenses but not other activities.

4.2.2 Thematic Analysis: Effects of Family Social Capital on Participants' Education Outcomes

Family social capital plays a significant role in influencing students' educational outcomes. The results showed that the more family social capital one received, the better school one could attend. Family social capital is demonstrated through family support, specifically when parents and relatives offer help to their students with school-related tasks, such as homework and class projects. Receiving quality help from parents and relatives might possibly helped students get into a better university, yet many non-project university students did not receive such help from home. All participants indicated that their parents and relatives helped them with their schoolwork until middle school. The amount of help the parents could offer their children was sometimes limited because the subjects were beyond their knowledge. In addition, five participants shared that their parents, at least one of the parents, were not college graduates. Therefore, it was hard for them to help their children once they reached high school and college. Furthermore, when participants talked about help from home, they mentioned their mothers more than fathers, possibly due to mothers being more concerned about their educational outcomes. Participant 3 expressed that whenever she asked her mother for academic help and her mother was not able to provide such help, she would hire a tutor or send her to after-school classes to get help from teachers. Participant 3 further shared:

> *"What she could probably do was to accompany me and pay for it. However, she could not provide any academic help because her knowledge level was insufficient. If you ask her, she would only say, 'How many years have I studied? How many years have I*

graduated?'. She does not understand my math questions because she was a liberal arts student".

Another participant also shared a similar idea. Participant 8 talked about how her parents only helped her during elementary school with some simple math homework, but when she entered middle and high school, her parents were not able to help at all.

When parents were not able to offer any academic help, some of the participants' close relatives stepped up to do so. Three participants shared that because some of their family members were teachers, they were able to help with them academically. For example, Participant 6 mentioned that her grandmother was able to help her when she worked on class projects because her parents were at work most of the time. Another example was when Participant 2 shared that some of her relatives were high school teachers, so they were able to provide academic help when she needed it. She indicated that "... all our relatives are math teachers, some in primary school, some were principals. So when I was in junior high school, they helped me a lot with math homework". However, she said such help was only given until middle school. When parents or other relatives were able to provide help, many parents chose to pay a private tutor or send their students to after-school classes. As mentioned above, Participant 3 was not the only one who shared this point. Six out of eight (75%) participants indicated that their parents chose to pay the extra money for them to get help elsewhere. All six participants shared that they believed that financial help was the most their parents could offer during that time.

4.2.3 Thematic Analysis: Effects of Social Networks during College and Beyond

Social networks benefit students to some extent. Most participants were from low-middle-class families, and the number of their social networks and their opinions on this subject were examined in this section. The results indicated that many of these families might lack social networks. However, many students viewed having stable social networks as beneficial, and they tried to maintain such connections to help them achieve their goals during and after college. In evaluating the effect of social networks on students, four themes were generated to examine the significance. This section's first theme discussed the benefits of family social networks on students' achievements. A few participants indicated that their parents were able to help them find internships or possibly jobs after graduation through their family's social networks. The rest of the participants were unsure if their families would be able to offer such help because they were unsure about their parents' social relationships. Nonetheless, having a

wider social network could potentially bring a better outcome from an educational perspective. For example, Participant 7 shared that her mother used her social connections to find a tutor who taught a specific English program. She was only able to do so through her mother's social networks. She also shared that her mother would hire Project 985 university students to tutor her in math and literature because her mother had obtained these connections through her personal networks with other parents.

The second theme discussed participants' individual social networks through their friends and peers, which were also an influential factor potentially affecting their educational outcomes. Five participants shared that their social connections with their class cohort and peers had benefited them academically. Participants all talked about how their personal relationships with their classmates and peers started in their dormitory. They built their social connections with each other since college and lived with their roommates. Participant 1 shared that dormitories in China were classmates from the same majors and class cohort. Therefore, it became a convenient way to get to know their classmates and develop relationships with them. Almost all participants indicated that they believed their relationships with their roommates were close compared to others in the class. Six participants believed that a solid connection with their peers and classmates would benefit them in the future. For example, Participant 3 stated that she would purposely interact with students who were high achievers in the class to get help on homework. She believed that interacting constantly with these high achievers could create a strong bond, and it might become an advantage when she needed their help in the future. Participant 4 also shared a similar opinion on his social networks. He said, "... if you are good friends with your classmates or roommates, maybe in the future, when I go to work or do business, we may be able to help each other". Participant 5 obtained most of her internships through her own personal connections and networks. She firmly believed in social networks and stated, "My parents did not help me find any internships; I found all my internships by myself. They were all introduced to me by my college classmates and friends". She considered a rich social network circle to be helpful and could potentially make a considerable difference in friendships and affect academic achievements. Since she majored in music, her social networks were more about having opportunities to perform and practice her instrumental skills. Therefore, in such cases, the more opportunities she gets introduced, the more chances she would have to be able to practice her skills at performances. She pointed out that her major was peculiar because her achievements

were highly associated with her social networks. She expressed that “Not just you having a strong social network, if your family and your parents also have a solid social network, people will be willing to choose you as a friend because of your or your family’s social networks, which I think is the reason why they pick me to be their friend is for the extra help they can get from me”. Personal social connections with the participants’ class cohorts and peers were believed to impact their current or future performances.

The third theme illustrated participants’ opinions on how they view social networks within Project 985 and 211 universities. Seven participants believed that students who went to Project 985 and 211 schools had more and better quality of social networks. Take two participants as an example. Participant 6 shared her opinion that “I think their social networks may be wider, or their connections may be more useful. But even though their social networks are wide, everyone will know some similar friends. In terms of quantity, there should be no difference between the two. However, in terms of quality, if Project 985 and 211 school students have made some outstanding contributions in a certain field, then it may be more convenient to do things in the same field than those not 985 and 211 students. It is similar to alumni connections”. She believed that Project 985 and 211 universities have more resources and social networks for their students. Their students may be able to achieve more in their fields compared to her own school, which was a non-project one. Similarly, Participant 3 indicated that Project 985 and 211 would have better academic environments and more advanced lab equipment compared to her school, which was a non-project college. She further expressed that “I think yes (they have more networks). For example, if the school assigns a supervisor to students, the supervisor will definitely guide their students. If the supervisor has any resources such as work or internships, they will prioritize introducing these opportunities to their students”. She revealed that if she had the chance, she would want to study in a Project 985 or 211 university for better educational resources and networks.

The last theme in this section highlighted the career outcomes of individual and family social networks. Academic achievements could also be shown through students’ career outcomes; most participants believed that they went to college aiming for a better career outcome and wishing they would be able to find a desirable job. However, most participants did not choose to attend their school’s career fairs and other related activities because they believed that internal referrals, such as social networks, played a more significant role in finding a suitable job.

Participant 4 indicated that “In fact, good jobs are difficult to find in the competitive market, and internal referrals and connections are actually a consensus. If I am a business owner, I also hope that old employees will recommend familiar people to come in. They are able to guarantee the quality, which is also part of the social networks”. Participant 6 also indicated that personal and family internal referrals were more advantageous compared to her school’s career fairs. She said, “ I think if you do not have good social networks or strong working ability, it is unlikely to find a good job in China. In fact, I talked to many people, and they are the same. Social networks are vital in finding a job or navigating life in school”. Many participants also believed that besides having a solid social network, school titles were also significant when finding a desirable job in the current market. Participants 1 and 7 all agreed that many companies would set specific requirements for the kinds of schools they were looking for in candidates. When looking for potential candidates, especially fresh graduates, they only choose students from Project 985 and 211 schools to interview. By combining these factors, having a solid social connection and a diploma could potentially increase the chances of achieving a better career outcome after graduation.

4.2.4 Thematic Analysis: Effects of Social Capital on Reproducing Educational Inequalities

This theme examines the effects of social capital on educational inequalities. The results showed that participants with lower social statuses and fewer financial resources were still unable to increase their statuses through education. This theme examined participants' social capital and socioeconomic statuses, but since the participants were not required to share their household incomes or social classes, social capital could only be indicated through pocket money and the amount of after-school classes taken, which was mentioned in Section 4.2.1. More social capital findings have to be examined by combining them with survey findings, which will be discussed in Chapter 5. However, there were a few critical findings generated from the interview transcripts for overarching question #4. Two participants shared that they got into their colleges through the special talent policy, which was, for example, to either have an award in arts or music, or win in a STEM competition in order to qualify for reduction of scores in the college entrance exam. In order to be qualified for the reduction, extra effects were required for them to spend quite an amount of money to take extra classes outside of school. Participant 7 shared that her parents spent more than 500,000 yuan for her to take extra classes every year, and her family definitely earned more than this amount. We could possibly put her family into the middle or

higher socioeconomic range. Nonetheless, she indicated that through the special policy, she was able to reduce 50 points for the score cut-off line for the school, which meant that she was able to score lower than her other classmates and still able to get into that school. She still got into a non-project university, but she said she might not be able to attend a higher education institution if she did not have that 50-point reduction. Most participants shared that non-project institutions often lack student support and do not teach them the necessary skills and prepare them for future work. Intense competition forced them to find help elsewhere, but their families were not wealthy or had the necessary social networks to help them. The importance of having better social capital could possibly be a game changer; however, many participants and their families had suffered from education inequalities, and they were not able to change the current situation as the resources were limited.

4.3 Summary

Quantitative and qualitative findings together explored the effects of social capital and family capital on students' academic achievements and beyond. Quantitative findings offered participants background information, while qualitative findings looked for deep insights into their experiences. The former quantitative findings helped to understand the participants' beliefs about higher education and their current situations within their social statuses, while the later qualitative findings explored the potential causes of their situations. Together, we aim to find out more about what educators could do to help improve their situations.

Chapter 5: Discussion

This chapter aims to continue answering the research questions and summarize the previous chapters in more depth. Quantitative results indicated participants' family and social capital, while qualitative results illustrated their academic achievements in college and whether or not their family and social capital influenced their achievements. This chapter first evaluates the results, then followed by interpretations of relationships between various factors and variables. These findings and interpretations are discussed by referring to the two main theoretical frameworks. Finally, future directions are acknowledged at the end of this chapter.

5.1 Academic Achievements and Family Capital Relationships

This section examines the relationships between academic achievements and family capital from two aspects: family financial capital and family social capital.

5.1.1 How does family financial capital impact academic achievements?

In order to find out about the effects of family capital on students' academic achievements, the study examined a combination of background information and various forms of family capital to illustrate their relationship with each other. The study discovered that various family financial capital factors, such as the number of siblings, the amount of household income, and pocket money, may have influenced students' academic achievements and their ability to attend Project 985 and 211 universities. In answering the overarching research question #1 and the effect of family financial capital on students' academic achievements, examining their family background information from quantitative data sets and personal experiences of family financial distributions among close members from qualitative data sets is critical. The quantitative findings suggested that most students and their families were not from the four major cities in China, and many of them were located in the south. Fan and Du's (2024) report showed that southern cities had higher fertility rates. The data from this study showed that the majority of participants came from households that had more than one child. Previous empirical studies suggested that families with multiple children could offer less support and resources compared to families with only one child (Liu et al., 2019; Alfridi et al., 2012; Yamaguchi, 1989). It is possible that having more siblings means having fewer resources within the family. However, since the sample size of this study is so small and data indicates such a finding is only found in the quantitative data sets, it is possible that this result is not generalizable enough to conclude it. It is possible since the majority of participants who went to non-project universities mostly came

from households with siblings, and such findings aligned with previous empirical studies that the number of siblings could be a potential influencer when obtaining educational resources from home. It can be one of the possible causes of inequality because the fewer siblings in one household, the more resources the parents could offer to each of their children, but more data has to be collected to support such a finding further.

Another similar finding was that students' academic achievements were associated with household income levels and parents' employability. Scholars Wu and Wang showed in their study that students from higher-income families tend to have a better chance of getting into better schools (2008). The current study further looked into parents' employment statuses, and the majority of participants' parents had a job during the time when the survey was taking place. A few families only had fathers working, while mothers did not have a job. Scholars Wu and Wang also supported the finding that parents' employability could affect students' achievements and influence the level of their schools (2008). Likewise, most participants were from low-middle-class, as their household data showed in the survey. Their socioeconomic status could influence the educational resources that were obtained by their students when they were growing up. Families with higher socioeconomic statuses obtained more resources compared to middle and lower classes. This quantitative finding is further supported by the qualitative results. Some participants shared that their parents only gave them limited living allowances that were enough for food every month during college (Participant 4 and Participant 8). Participants believed that they did not have extra money to spend on other educational-related items unless they asked their parents for more money. Many of them later found part-time jobs to support themselves as they knew their parents did not have enough money to support them. The current study's results took Scholars Wu and Wang's study to an extent and showed that students' academic achievements and family financial capital were interconnected with each other.

Furthermore, household income was not the only indicator when talking about family financial capital. The study also examined family financial capital from various perspectives, such as pocket money, living expenses in college, after-school lessons, and parents' attitudes. Pocket money served as an alternative form of family income, and it could potentially be an indicator of students' academic achievements. Scholars Shah, Syeda, and Bhatti illustrated such an idea in their study that "pocket money is positively correlated with family income, father's education, and mother's education" (Shah et al., 2012, p. 691). In this current study, we looked

into the effect of pocket money on students' achievements and their families' attitudes toward spending their pocket money on school-related items to indicate family financial capital. The findings further supported Scholar Shah's findings and showed that all eight participants spent their pocket money carefully. Most of them spent their pocket money on school supplies only, which showed that their families were strict about where they used this money, and these families might have lower incomes. In addition, family financial capital was also measured by participants' experiences of taking after-school lessons and their parents' attitudes toward spending a significant portion of their household income on these lessons. Previous studies indicated that after-school lessons positively affected students' academic achievements and promoted social skills (Durlak & Weissberg, 2007; Huang et al., 2011; Fashola, 2002). However, this study offered the opposite findings. The current study discovered that even though many families were willing to spend a considerable amount of income for their students to take after-school lessons, the effect of these lessons on their achievements remained minimal. Participants shared in the interviews that their lessons were "useless" when it came to helping them get into a higher level of university (Participant 4 and Participant 7). Such a finding did not support previous studies as it could be the results of the quality of their after-school lessons or problems with their tutors. Various reasons could occur when taking after-school lessons did not help these participants get into Project 985 and 211 universities. Pocket money and after-school lessons are two indicators of family financial capital and showed that family financial support influenced the educational resources non-project university students could obtain. If they had been wealthier, it might have been possible that they would have been able to purchase more school supplies and attend higher quality after-school classes, which could have resulted in them getting into Project 985 and 211 universities.

5.1.2 How does family social capital connect to students' educational outcomes?

In answering the overarching research question #2 and discussing the outcome of family social capital, one must look into parents' education levels. This study discovered that family social capital, such as parents' educational levels, family education support, and parent-children interactions, might influence students' educational outcomes. Parents' education levels impacted students' academic achievements as parents with higher education levels often had more financial resources, and these parents were more likely to help with school-related work (Clearinghouse for Military Family Readiness at Penn State, 2020). The current study's findings

also indicated such a trend that parents who did not have a higher education level degree tend to pay less attention to their students' schoolings. For example, Participant 8 shared that her parents were not college graduates. She talked about her schooling experiences: "They basically didn't take care of my studies, and if I asked them any academic questions, they didn't really have an answer". Such a finding revealed that most participants' parents were not able to help them academically as they lacked the necessary skills. Family social capital was demonstrated in family support, and the lack of such support could potentially cause these students to attend only non-project universities. Furthermore, the Clearinghouse study also indicated that mothers' education level positively influenced students' academic achievements, as it was mentioned that "College-educated mothers spend more time providing child care and age-appropriate activities with their children than mothers who have a high school education (Clearinghouse for Military Family Readiness at Penn State, 2020, p. 4; Kalil et al., 2012). The current study's quantitative results also supported the finding that most of the participants' mothers only obtained secondary school-level diplomas. Only a small portion (28%) of mothers had a higher education degree. This could influence their students' academic achievements and become a factor for their students only attending non-project universities.

5.2 Academic Achievements and Social Capital Relationships

This section focuses on the effects of social networks on students' academic achievements and further points out the roles that social capital and *hukou* play in causing educational inequalities among Chinese college students.

5.2.1 How do social networks affect academic achievements?

In discovering answers to the overarching research question #3, this study examined various aspects of social networks, and it suggested that social networks influence academic achievements by offering additional family and peer support to students' schooling. This study tied back to Coleman's ideology on social networks from his social capital theory. Coleman emphasized the effects of networks by examining catholic schools, in which catholic school students had a better academic performance compared to public school students (Morgan & Todd, 2009). According to a previous study, Scholars Morgan and Sorensen further indicated such findings in their study and viewed Coleman's ideology from the perspective of parental networks. Scholars Morgan and Sorensen believed that social closure, networks between students, parents, and teachers, could affect students' academic performances (1999). In other

words, if parents pay close attention to their students' academic performances and stay connected with teachers, it becomes possible that students could perform better academically. However, this current study examined such aspects and found that most parents did not stay connected. They only paid for their after-school lessons and did not bother to follow up. Coleman's ideology suggested that a close community of parents and teachers was a key to academic success (Coleman & Hoffer, 1987). Nevertheless, many participants shared that their parents did not maintain such a bond.

Another way of viewing family social networks was through the lens of using social networks from family and friends, for instance, for the benefit of extra academic help. Scholar Mishra critically discussed how family and peer networks could have a positive effect on students' achievements (Mishra, 2019). Scholar Mishra mentioned that social networks between family and friends formed close ties that could bring benefits, such as new information and opportunities, otherwise could not be obtained through other channels. Scholar Mishra believed that parents who were college graduates already formed a close network and mobilized information that was important for success. Students whose parents did not graduate from college often lacked such support (Mishra, 2019). Such a finding connected to the current study as the qualitative results showed that a small portion of the participants' families did not have strong social networks to help their students further either academically or career-wise. Participant 7 described that her family did not have a strong social network and was unable to offer any additional help. She had to find help on her own. Other participants shared that they believed family social networks were essential when finding a job or an internship after graduation. They also admitted that internal referrals were more critical when getting a job in the future as these referrals served as part of their family's social networks. Participants knew that richer social networks could result in a successful outcome and higher achievements, which such an idea was also highlighted by Scholars Bond, Chykina, and Jones (2017).

Not only did family social networks play a significant role in determining students' educational outcomes, but social networks of peers and friends also contributed to achievements. Previous studies examined the effects of peer groups on academic achievements, as high-achieving students tend to make friends from similar backgrounds and maintain the same level of achievement (Bond et al., 2017; Lavy & Sand, 2012). Having more high-quality social networks could be an indicator of a higher level of social skills; as Scholar Bond pointed out that

"If more centrality is indeed indicative of higher levels of social skills, than higher achieving students might have an additional job market advantage over lower achieving ones" (Bond et al., 2017, p. 446). Many participants shared similar ideas, and they believed that making friends with these high-achieving students could benefit them in the future, even outside of school. Participants 3 and 4 all talked about how they purposely make friends with other high-achieving students in hopes these students would bring them benefits in the future. A similar concept was mentioned during the interview process. Participants were asked if they had any friends from Project 985 and 211 universities and if they still had connections with these students. All participants had friends from Project 985 and 211 universities, and seven out of eight participants (88%) commented that they believed that students from Project 985 and 211 universities had better social networks because more high-achieving students were in their groups. More resources and more opportunities were associated with Project 985 and 211 schools. Hence, family and peer social networks influence students' academic achievements in many ways, as high-quality social networks could bring more benefits than low-quality networks. Participants were well-known for their situations and tried to fit into these network circles in hopes of better returns.

5.2.2 The role of social capital and hukou played in causing educational inequalities

According to previous quantitative and qualitative findings, social capital did contribute to educational inequalities among these non-project university students in many ways. This current study supported both Coleman's and Bourdieu's approaches to social capital theory. Since most of the participants were from low-middle-socioeconomic backgrounds, it was clear that these students had fewer educational resources compared to other groups. Coleman's ideology took on the collective angle and believed that social capital and social networks were more beneficial if they were in a community (Coleman, 1988). However, participants from such a background did not have a strong network relationship because this current study showed that their families also struggle providing high-quality networks and financial resources for their students. Scholars Liu, Ku, and Morgan further indicated such findings in their study and suggested that "... students in rural areas, where the majority of students from low-SES homes reside, most often engage in private tutoring from their teachers and it results in a deleterious effect on the NCEE (National College Entrance Exam/ Gaokao) scores" (Liu et al., 2019, p. 4). Scholar Liu points out that poorer families spending a significant portion of their income on after-school lessons could still

have a negative effect on the students' scores and further hinder their social mobility (2019). This current study also had similar findings, as most of the participants shared that they attended after-school lessons but still attended non-project universities. This could be the result of poor-quality tutoring and lack of support from home, which caused educational achievement gaps among these students. Moreover, this current study also adopted Bourdieu's approach to individualism. Bourdieu believed social capital was inheritable as the rich would likely stay rich and the poor would still be poor (Bourdieu, 1986). This current study again discovered that social mobility became harder in these less advantaged groups. All participants shared in their interviews that their parents believed that higher education was an essential step in one's education career. However, only attending non-project universities was not enough to change their current situations. They faced various challenges and still remained in their social circles. Most of them had to put much more effort into their studies than students from higher-status families.

Both family and individual social capital caused educational inequalities, and the concept of *hukou* perfectly explained the root causes of such inequalities. During the years of schooling, *hukou* was part of the family capital; after college, *hukou* became part of one's social capital. Scholars Afridi, Li, and Ren discussed the importance of *hukou* since birth (2012). *Hukou* was firstly associated with his or her family's socioeconomic status, and the latter became part of an individual's social status. Having an urban *hukou* from the four major cities in China offered many more educational opportunities compared to a rural *hukou* holder. More advanced and higher quality schools were located in urban areas, which became more challenging for rural *hukou* holders to access. Therefore, such reasons became part of the initial thought of this study as we looked into participants' *hukou* locations to see if it affected their educational outcomes. In fact, the findings discovered that most participants were not *hukou* holders of the four major cities or their families. Therefore, the findings showed that most of the participants did not upwarding their social mobility as they remained in their birthplace. *Hukou* was a representation of family capital and social capital in China, and it greatly affected students' academic achievements as it could determine what kinds of resources they were obtaining from home and outside. Participants from non-projected universities still face inequalities as they encounter more challenges from various places.

5.3 Future Directions

By considering the limitations of the methodology chapter, future studies can take those limitations into account and look at having a more comprehensive range of participants. This study only looked at non-project university students and needed more participants from the Projected 985 and 211 university students. The data is relatively thinner and needs more generalization to the whole Chinese college student group. In addition, this study should include more participants from all northern, southern, and remote areas with a greater gender distribution, which would be more beneficial. More sample techniques can be used to collect responses, such as snowball, quota, convenience, and so on. In this way, examining more participants' experiences can offer a better understanding. Future studies can also look into using different research methods, such as case studies, focus groups, and in-depth quantitative analysis. Exploring different methods may have unexpected findings and offer more insights when answering the research questions. Moreover, this current study only examined the relationships between social capital, family capital, and academic achievements, as there are many other factors that can influence the students' academic achievements in college. Future studies can explore other factors and offer a more complete picture to help non-project university students close the gaps.

5.4 Conclusion

Non-project university students often face more challenges when obtaining educational resources. Many factors can influence educational inequalities among this group of students. This current study takes on the view from a social perspective to examine those possible causes. A better understanding is gained by incorporating the two theoretical frameworks, social capital theory and family capital theory. The current study discovered the effects of family capital and social capital on students' academic achievements and offered insights into the current issues in Chinese society. The study concluded that family backgrounds, financial support, socioeconomic statuses, *hukou* locations, and social networks all influenced students' achievements and potentially contributed to educational inequalities. However, this is only the case for a small number of participants in this study. Essentially, educators should be aware that achievement gaps can result from multiple factors. Examining from a well-rounded perspective is critical to help these students close the gaps.

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Appendix 1

Dissertation survey
Basic information

1. Gender
2. Age range (Below 18 or above 18)
3. Current School types attended (vocational, associate, independent, private, public, 985/211, adult HEIs, overseas, etc).
4. household registration (Hukou) locations (urban or rural, Beijing Shanghai Guangzhou Shenzhen or other cities)
5. Where do you or your family live currently?
6. GPA or equal percentage
7. College placement tests (Gaokao) or not

Family capital: Likert scales 0-6, (0=strongly degree 6=strongly agree)

1. Parents information: father hukou (household registration)
2. Mother hukou (household registration)
3. Father's education level
4. Mother's education level
5. How many siblings do you have?
6. Employment status for parents?
7. Family annual income / how many houses/cars do your family own?
8. Do you receive any pocket money from your parents? if so please selected a range
9. Taking after school classes since elementary school (sort by # subjects)
10. The age when you started to learn English
11. I believe my parents are supportive in action when I have to purchase materials for school related projects?
12. My family desires higher education as much as I do
13. My family cares about my academic performance at school throughout my education career
14. I want to pursue a higher degree after the current one
15. I am confident that I can find a job after graduation
16. My parents will continue to support me financially after graduation

Social network both family and friends: Likert scales

17. Do you have close relatives (grandparents, uncles/aunts, close friends) living nearby?
18. My family was able to help me find an internship/job
19. I received academic help from my parents or family members throughout my education career.
20. I believe the relationship with my class cohort will benefit me in the future
21. When working on academic related projects or reports, I prefer to work in groups
22. I have assumed that elite universities (projected 985/211) would have a wider social network compared to my school.

23. I believe that the social relationships I have now will bring advantages when going into the workforce.
24. I make connections with people because of the potential benefits they will bring me.
25. I have once or more received an internship offer/ job offer from connecting with alumni from my school

Interview Questions:

Family Capital

1. Would you please tell me how you spent your pocket money? Or if you didn't have any pocket money growing up, who is responsible for your living expenses during college? How do you plan to use these money? 可以讲讲您现在父母还会给零花钱吗？是从小到大都有吗？如果没有零花钱, 父母会给生活费吗？您一般怎么支配这些钱呢？
2. What are your parents' attitudes when spending money on school related stuff like after school programs or extra worksheets? Have they ever complained about how expensive they are? 当您把钱花在与学校学习相关的东西上, 比如补习班或者习题册之类的, 您父母一般是什么样的态度呢？他们会抱怨说这些很贵吗？
3. Why do they think higher education is important? Did they graduate from any higher education institutions? 您父母为什么觉得上大学很重要？他们自己是大学毕业的吗？
4. What do you think about the current graduate student crisis that many of the newly grads can't find a job? 您如何看待如今很多大学生毕业了找不到工作这个问题？
5. How will your parents support you after graduation? Will they continue to pay for your expenses? Or are you on your own now? Tell me about your thoughts on this. 您毕业了以后您的父母还会支持您的生活费用吗？还是说毕业了以后他们再为您支付了？可以详细说说吗？

Social networks

1. How did your family help you when trying to find a job or an internship? 您在找工作或实习时, 您家里人给了您什么帮助吗？
2. Please tell me a time that your family members helped you academically? It can be anything memorable. 您可以说说您家人在学业上对您的帮助吗？可以是任何让您记忆犹新的情景。

1. Do you think social networks play an important role in friendships? 您认为社交关系网在友情里扮演重要角色吗？比如我通过我的朋友认识了另一个朋友, 这个朋友在学业上/别的事情上给我帮助。
2. Do you think your class cohort's guanxi is more complex than your personal friendships? If so, why? 您觉得您现在班上的社交关系比您私人的友情更复杂吗？为什么？(比如班上同学有不一样的家庭背景？)
3. Do you know anyone from the projected 985/211 schools? Did you regret not being able to attend these schools? 您认识985/211 的同学吗？您有后悔过没有去985/211 吗？为什么？

4. Does your school have career services? Are you using these services? Or do you think your family might be able to help you with finding a job later? 您的学校有就业服务吗？您有参与过学校的招聘活动吗？或者您觉得您的家人以后会帮您找工作吗？
5. What do you think about the current job market? Do you think people with less social networks are able to thrive? 您对现在的就业市场有什么看法？您觉得没有那些社交关系网比较少的人可以在现在这种情况下找到好工作吗？

Appendix 2

SOCIAL SCIENCES & HUMANITIES
INTERDIVISIONAL RESEARCH ETHICS COMMITTEE
DEPARTMENTAL RESEARCH ETHICS COMMITTEE

Department of Education
15 Norham Gardens, Oxford OX2 6PY
student.curec@education.ox.ac.uk; staff.curec@education.ox.ac.uk

Rongwei Li
Department of Education, Social Sciences Division
University of Oxford

11 March 2024

Dear Rongwei,

Research ethics approval

Research title: Pathways to Equality: A Study on the Impact of Students' Social Network and Family Capital in Chinese Higher Education

Research ethics reference: EDUC_C1A_24_042

The above application has been considered on behalf of the Education Departmental Research Ethics Committee (DREC) in accordance with the University's procedures for ethical approval of all research involving human participants.

I am pleased to confirm that, on the basis of the information provided to the DREC, ethics approval has now been granted for this study.

Please note the following:

Personal data: It is the responsibility of the PI to ensure that all personal data collected during the project is managed in accordance with the University's guidance and legal requirements.

In-person activities: Any data collection involving in-person interactions with participants must have an up-to-date fieldwork risk assessment in place; further guidance is available from the Safety Office's website.

Amendments: Please notify the committee if you intend to make any amendments to the information in your ethics application as submitted at date of this approval, as all changes must receive ethical approval prior to implementation. The amendment form is available on the SSH IDREC webpage.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to staff.curec@education.ox.ac.uk / student.curec@education.ox.ac.uk or ethics@socsci.ox.ac.uk.

Yours sincerely

Lulu Shi

DREC member

cc: Dr. Kelsey Inouye kelsey.inouye@education.ox.ac.uk;
student.curec@education.ox.ac.uk

Appendix 3

Contact Information:
Ms. Rongwei Li / Dr. Kelsey Inouye
Department of Education, the University of Oxford
15 Norham Gardens, OX2 6PY
University email: rongwei.li@st-annes.ox.ac.uk / kelsey.inouye@education.ox.ac.uk

Pathways to Equality: A Study on the Impact of Students' Social Network and Family Capital in Chinese Higher Education

PARTICIPANT INFORMATION SHEET

Central University Research Ethics Committee Approval Reference: EDUC_C1A_24_042

1. Introductory paragraph

You are being invited to take part in a research project. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether you wish to take part.

2. Why is this research being conducted?

Students are expected to collect information in their empirical studies as part of the degree requirements at the University of Oxford. This research examines the potential educational inequalities that might have hindered Chinese students from attending elite universities (Projected 985/211). Much research has shown that rich family networks and family capital are advantageous for students' academic outcomes. This research study aims to discover ways to close the educational achievement gap for students with less help from their family capital and their parents' social networks.

3. Why have I been invited to take part?

Anyone over 18 years old who earned or is currently working on their undergraduate degree from a Chinese university other than Projected 985/211 will be eligible for participation. You received this information sheet based upon your completion of the previous survey and indicated that you would like to participate in the follow up interview.

4. Do I have to take part?

No. It is up to you to decide whether to take part. You can withdraw yourself from the research without giving a reason and by advising me of this decision. The deadline by which you can withdraw any information you have contributed to the research is April 30st, 2024. After this date, all data will be analyzed, and I will be unable to take your answers out.

5. What will happen to me if I take part in the research?

There will be no in-person visits; all information will be collected through online platforms, Microsoft Teams. The interviews will last around 30 to 40 minutes. The interview will ask more in-depth questions about social networks and family, which might require you to share more details about your experience. If you feel uncomfortable sharing any details, you may let me know during the interview.

With your consent, I would like to audio record you so I can accurately record our conversation for future analysis.

You may ask to pause or stop the research activities at any time.

6. What are the possible disadvantages and risks in taking part?

Please be aware that all research can bring possible disadvantages and risks. This research will never ask about your name or other identifiable information about who you are. However, there is an extremely low chance that audiences or readers will recognize you based on your stories.

Please note that your privacy is my top priority, and all personal identity data will be anonymous and used for this research only.

7. Are there any benefits in taking part?

While there are no immediate benefits for those people participating in the research (e.g., there will be no payment for taking part in this research), it is hoped that this research will give policymakers some potential suggestions and may lead to possible improvements in the future because every opinion matters.

8. What information will be collected and why is the collection of this information relevant for achieving the research objectives?

I am interested in your experience with the Chinese higher education system. The information you provided will help me better understand the inequalities that can lead to the educational achievement gap among Chinese students.

The researcher, Rongwei Li, and her supervisor, Dr. Kelsey Inouye, will have access to the research data.

Identifiable data (including consent forms) will be stored in Rongwei Li's Oxford OneDrive for up to three years after submission. No data will be transferred to or stored at a destination outside of the UK and the European Economic Area. All data will also not be used for future studies.

9. Will the research be published? Could I be identified from any publications or other research outputs?

The findings from the research will be written up in a dissertation and might be submitted for academic publications. No identifiable information will be released, and you may wish to withdraw before April 30st, 2024.

We would like your permission to use direct quotations but without identifying you in any research outputs.

10. Data Protection

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the research. The University will process your personal data for the purpose of the research outlined above. Research is a task that is performed in the public interest. Further information about your rights with respect to your personal data is available from the University's Information Compliance web site at https://compliance.admin.ox.ac.uk/individual-rights.

11. Who has reviewed this research?

This research has received ethics approval from a subcommittee of the University of Oxford Central University Research Ethics Committee. (Ethics reference: EDUC_C1A_24_042).

12. Who do I contact if I have a concern about the research or I wish to complain?

If you have a concern about any aspect of this research, please contact Rongwei Li or her Supervisor below, and we will do our best to answer your query. We will acknowledge your concern within 10 working days and give you an indication of how it will be dealt with. If you remain unhappy or wish to make a formal complaint, please contact the Chair of the Research Ethics Committee at the University of Oxford who will seek to resolve the matter as soon as possible:

The Chair, Education Department Research Ethics Committee Email: staff.curec@education.ox.ac.uk; Address: Department of Education, the University of Oxford, 15 Norham Gardens, OX2 6PY

13. Further Information and Contact Details

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:

Ms. Rongwei Li

Department of Education, the University of Oxford

15 Norham Gardens, OX2 6PY

University Tel: 01865274024

University email: enquiries@education.ox.ac.uk

OR

Dr. Kelsey Inouye

Department of Education, the University of Oxford

15 Norham Gardens, OX2 6PY

Email: kelsey.inouye@education.ox.ac.uk

Appendix 4

Consent to take part in the research study [Pathways to Equality: A Study on the Impact of Students' Social Network and Family Capital in Chinese Higher Education]

Central University Research Ethics Committee (CUREC) approval reference: EDUC_C1A_24_042

Purpose of Study: This study aims to discover ways to close the educational achievement gap for students with less help from their family and their parents' social networks.

	Please initial each box if you agree with the statement
I confirm that I have read and understand the information sheet for the above research. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
I understand that my participation is voluntary and that I am free to withdraw at any point until 30/04/2024, without giving any reason.	
I understand who will have access to personal data provided, how the data will be stored and what will happen to the data at the end of the project.	
I understand I will not be identifiable from any publications or any other research outputs such as any organization reports, presentations, videos, etc.	
I consent to being audio recorded.	
I understand my audio recordings will be used in research outputs.	
Use of quotations: Please indicate your preference (please only select one option): a) I do not wish to be quoted. or b) I agree to the use of quotations in research outputs if I am not identifiable. or c) I agree to the use of direct quotations, attributed to my name, in research outputs.	a. b. c.
I give permission for you to contact me again to clarify information.	
I understand how to raise a concern or make a complaint.	

I agree to take part.[1] ☐

_____	dd / mm / yyyy	_____
Name of participant	Date	Signature

_____	dd / mm / yyyy	_____
Name of person taking consent	Date[2]	Signature

[1] In certain projects researchers may want to add an additional statement: [I hereby assign to the researcher all copyright in my contribution for use in all work stemming from this project and future projects.]

[2] To be signed and dated in the presence of the participant. Once this has been signed by both parties the participant should receive a copy of the signed and dated participant consent form. The original signed and dated consent form should be kept with the project's main documents, which must be kept in a secure location.

Appendix 5

Contact Information:
Ms. Rongwei Li / Dr. Kelsey Inouye
Department of Education, the University of Oxford
15 Norham Gardens, OX2 6PY
University email: rongwei.li@st-annes.ox.ac.uk / kelsey.inouye@education.ox.ac.uk

Pathways to Equality: A Study on the Impact of Students' Social Network and Family Capital in Chinese Higher Education

CUREC Approval Reference: EDUC_C1A_24_042

General Information 研究描述

This research study aims to discover ways to close the educational achievement gap for students with less help from their family and their parents' social networks. 此研究旨在探索如何为家庭帮助较少、父母社交网络不足的学生缩小教育成就差距。

We appreciate your interest in participating in this questionnaire. You have been invited to participate as you are over 18 years old and is currently an undergraduate student in China. Please read through this information before agreeing to participate (if you wish to) by ticking the two boxes below. 感谢您对本问卷调查表达的兴趣。您之所以被邀请参与，是因为您已满18岁且是一名中国大学本科生。请在决定是否同意参与前仔细阅读此信息（如果您愿意参与），请勾选下方的两个框。

You may ask any questions before deciding to take part by contacting the researcher (details below). 在做出决定之前，您可以通过联系研究员（详细信息如下）提出任何问题。

The Principal Researcher is Rongwei Li, who is attached to the Department of Education at the University of Oxford. This research is being completed under the supervision of Dr. Kelsey Inouye. 主要研究员Rongwei Li，隶属牛津大学教育系。本研究在Kelsey Inouye 导师的指导下完成。

You are asked to complete this questionnaire based on your experience and your perspectives on the sentences listed below each section. This should take about 10 minutes. No background knowledge is required. Your answers will be used to write up for a course assignment. Only the researcher and her supervisor will have access to them. The questionnaire does not require your name, as it is anonymous. 我们邀请您根据下列每个部分列出的句子，基于您的经验和观点完成本问卷。这大约需要10分钟。不需要任何背景知识。您的答案将用于课程作业的撰写。只有研究员及其导师能够访问这些答案。问卷不要求您提供姓名，因为它是匿名的。

Do I have to take part? 我必须参加吗？

No. Please note that participation is voluntary. If you do decide to take part, you may withdraw at any point for any reason before submitting your answers by pressing the 'Exit' button/ closing the browser. 不。请注意，参与是自愿的。如果您决定参加，您可以在提交答案之前的任何时候，因任何理由按下"退出"按钮/关闭浏览器来退出。

How will my data be used? 我的数据将被如何使用？

The data we will collect that could identify you will be your contact information only if you wish to participate in the following interviews. 如果您愿意参与后续的访谈，我们将收集的能识别您身份的数据仅限于您的联系信息。

Your IP address will not be stored. We will take all reasonable measures to ensure that data remain confidential. 您的IP地址不会被存储。我们将采取所有合理措施确保数据的保密性。

The responses you provide will be stored in a password-protected electronic file on University of Oxford secure servers and may be used to write up for a course assignment. The data, according to the university requirements, will be stored up to 3 years after the public release of the work of the research. 您提供的响应将被存储在牛津大学安全服务器上由密码保护的电子文件中，并可能用于课程作业的撰写。根据大学的要求，数据将在研究工作公开发布后最多存储3年。

Who will have access to my data? 谁能访问我的数据？

The University of Oxford is the data controller with respect to your personal data and, as such, will determine how your personal data is used in the research. The University will process your personal data for the purpose of the research outlined above. Research is a task that we perform in the public interest. Further information about your rights with respect to your personal data is available from https://compliance.admin.ox.ac.uk/individual-rights. 牛津大学是您个人数据的数据控制者，因此，将决定如何在研究中使用您的个人数据。大学将出于上述研究目的处理您的个人数据。研究是我们执行的一项公共利益任务。有关您个人数据权利的进一步信息，可从 https://compliance.admin.ox.ac.uk/individual-rights 获取。

The results will be written up for an MSc degree.

Who has reviewed this research? 谁审查了此研究？

This research has been reviewed by, and received ethics clearance through, a subcommittee of the University of Oxford Central University Research Ethics Committee [EDUC_C1A_24_042]. 该研究已经通过牛津大学中央大学研究伦理委员会的审查。

Who do I contact if I have a concern or I wish to complain? 如果我有疑问或者需要投诉应该联系谁？

If you have a concern about any aspect of this research, please contact **Rongwei Li** or her supervisor on the top of the first page, and we will do our best to answer your query. We will acknowledge your concern within 10 working days and give you an indication of how it will be dealt with. If you remain unhappy or wish to make a formal complaint, please contact the Chair of the Research Ethics Committee at the University of Oxford who will seek to resolve the matter as soon as possible: 如果您对本研究的任何方面有疑问，请联系Rongwei或她的导师（在第一页的顶部），我们将竭尽全力解答您的疑问。我们将在10个工作日内确认您的疑问，并告知您处理方式。如果您仍然不满意或希望正式投诉，请联系牛津大学研究伦理委员会主席(联系方式在下方)，我们将尽快解决此事。

The Chair, Education Department Research Ethics Committee Email: staff.curec@education.ox.ac.uk; Address: Department of Education, the University of Oxford, 15 Norham Gardens, OX2 6PY

Please note that you may only participate in this survey if you are 18 years of age or over.

☐ I certify that I am 18 years of age or over 我证明我已年满18周岁。

If you have read the information above and agree to participate with the understanding that the data you submit will be processed accordingly, please tick the box below to start.

☐ Yes, I agree to take part 本人同意参与研究