

**One childhood Two directions: School Segregation on Migrant Children's  
Education in urban China**

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Master thesis in Sociology

Governance of Migration and Diversity

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Date: 19-06-2022



### **Abstract**

This study focused on the educational inequality between migrant children and urban children in China, reflected by academic ability. This kind of inequality is believed to be caused by double-standard education policies rooted in the *hukou* system through school segregation. By using secondhand data from China Family Panel Survey (CFPS) in 2018, the assumption that migrant status, family socioeconomic status and regional differences based on education policies have an impact on the academic ability of migrant children and urban children. The result showed that there is an educational disparity between migrant children and their local peers and overall migrant children perform worse than their peers. Secondly, family socioeconomic status is statistically associated with test scores. Finally, regional differences have an interacting effect on the migrant status and ability. In the region where they implement strict *hukou*-based education policies, the score gap between children of migrants and urban locals is the smallest.

*Keywords:* education inequality, migrant children, education policies, the *hukou* system

## **One Childhood, Two Directions: School Segregation on Migrant Children's Education in Urban China**

### **1. Introduction**

Since the 1980s, China's economy has grown rapidly. The need for labor in urban areas attracts a large number of rural residents. More and more parents tend to bring their children with them and look after them. These children are usually called migrant children. Based on data released by the Ministry of Education, an estimated 18.97 million children in compulsory education moved with their parents in 2017, an increase of 17.6% over the last five years (Broadbent, 2018).

As a result of the constraints of the *hukou* system, migrant workers are still not considered "full citizens" in these urban areas. Migrant children are subject to institutional arrangements, which causes a unique form of segregation and educational inequality. These restrictions determine whether they can enroll in a state school or a relatively low-quality migrant school. These migrant schools tend to be unstable, low-ranking, and lack professional teachers and facilitators (Kwong, 2004). Many scholars in migration studies have proven the disadvantaged and vulnerable status of migrant children in China's education system (Chen & Feng, 2013; Goodburn, 2009; Gu & Yeung, 2019; Huang et al., 2016; Lu & Zhou, 2013). Due to China's emphasis on academic performance, migrant children who do not do well academically or enter university, will have difficulty elevating their social status in the future.

Existing research has shown a gap in educational ability between migrant and native urban children, as well as investigated many possible factors for low achievement among migrant children in China. Compared to migrant children, the parents of urban children are more likely to have a better educational background and higher social class. This would offer urban children opportunities to access extracurricular classes and learning surroundings, which affects the achievement gap between migrant children and urban children. *Hukou*-based school segregation has also been examined as a cause of poor academic ability. However, few studies have taken the context of local education policy into consideration. Researchers have made some effort to depict the whole picture of migrant children's low academic ability. However, due to complicated governance and different local governments, the implementation of education policies is very varied. Migrant children and their parents face different constraints for school enrollment and during school.

Ma (2019) captures this gap by dividing cities into two categories: municipal and non-municipal. According to this categorization, four municipal cities, including Beijing and Shanghai, tend to be strict regarding inclusive educational policies, while other cities were directly connected with non-municipal cities. Yet, the typology of Ma (2020) overlooks the differences between different provinces and cities. There are also some differences between non-municipal cities. Those cities which try to attract high-skilled workers lower the threshold for living and their children to study. However, some cities tighten their policies due to a lack of funding (Zhu et al., 2020).

Furthermore, the definition of migrant children was based exclusively on the *hukou* system. Researchers measure migrant status by different categories based on the

characteristics of the *hukou* system. Local/non-local and rural/urban divisions were the most popular distinctions (Gu & Yeung, 2019; Lu & Zhou, 2013; Ma, 2019; Ma et al., 2018). Xu and Wu (2016) employ rural/urban and local/non-local (the place of residence is different from the place of current residence, usually across provinces or cities) divisions, establishing a typology of four categories. Overall, their typology makes few distinctions among migrant children, and variables such as birthplace or duration of migration are rarely included.

Therefore, this study tries to demonstrate **how policies in different provinces affect the relationship between children's migrant status and their academic ability. Is the score gap between migrants and non-migrants narrower in those cities with less strict education policies?**

Focusing on the issue of migrant children and identifying the factors influencing educational inequality will contribute not only to their future and that of their families, but also to society as a whole. In all contemporary societies, education plays a critical part in the stratification processes. The low rate of college access and high school access showed that rural youth from poor counties have been left behind (Li et al., 2015). Although the children of migrant workers who move to the cities partly enjoy better resources for primary education than in the countryside, they still face a more unstable life and an unforeseen future than their peers. Meanwhile, China is currently in a phase of rapid development, but still relies heavily on workers from low-end industries. This is reflected by data that China has the lowest level of human capital among middle-income countries (NCUSCR [National Committee on U.S.-China Relations], 2020). The improvement of school quality for children with rural *hukou* and from rural areas would be beneficial for improving the level of human capital of China (NCUSCR, 2020). With the transformation of the Chinese economy to high-tech industries and the outflow of low-end manufacturing industries, there is a growing demand for highly educated people, while eliminating many jobs for the low-educated population. This will affect the economy of future China and the stability of future society.

## **2. Theoretical framework**

To better understand the concepts mentioned above, this section provides a description of the existing *hukou* and education policy in China. This is followed by a review of the implementation of policies in different cities after educational reform. The relation between school segregation and academic ability, and other factors that may influence children's ability are then presented.

### ***The hukou and educational policy in China***

In the 1950s, the *hukou* system was designed to guarantee the supply of basic needs and state welfare in cities and restrict the movement of rural people (Zhou, 2020). *Hukou* is a traditional dualistic registration system for rural and urban people. Nowadays, the *hukou* system not only works between rural and urban areas, but also in different provinces. Not having a local *hukou* means that a person is largely excluded from the local welfare system. Over time, the restrictions of the *hukou* system have been extended to housing, employment, and health care opportunities (Zhou & Cheung, 2017). These restrictions are based on the

area in which citizens are registered in their household, instead of their actual place of residence (Liang & Chen, 2007). Although this system has developed through time, it still has an impact on people's daily issues. The characteristics of *hukou* can be summarized as (1) an identity attributed at birth, (2) a classification of the general population into unequal social categories, and (3) access to resources and opportunities (Xu & Wu, 2016).

In terms of education policy in China, every child must receive a 12-year basic education, including 6 years in primary school, 3 years in middle school (junior secondary school), and 3 years in high school (senior secondary school). Completing nine years of primary and junior secondary school education is compulsory for every child. If the government and parents fail to guarantee children's nine-year compulsory education, they are in contravention of the Compulsory Education Law of PRC (Ministry of Education, 1985).

With the various arrangements that extend from the *hukou* system, migrant children have been treated separately while attending school. In the 1980s, every child was expected to attend a primary and junior secondary school that was placed in their *hukou* registration area according to the Compulsory Education Law of PRC (Ma, 2019). During the 1990s, with the liberalization of the *hukou* system, migrant workers were able to bring their children with them. These children also had the chance to live in the cities. Nevertheless, because of lacking local *hukou*, they had no access to free urban public schools. The only way to become educated was to enroll in migrant schools (Kwong, 2004). Goodburn (2009) observed that only a few migrant schools could follow the state curriculum and use the same textbooks as public schools. Moreover, these schools did not value the health or physical fitness of students. The situation changed after 2000. The central government realized the importance of protecting the rights of migrant children to obtain compulsory education in urban areas. The 2006 amendment to the 1986 Compulsory Education Law stipulates

*For a school-age child and juvenile whose parents are working or dwelling at a place other than their permanent residence, if he/she receives compulsory education at the place where his/her parents or other statutory guardians are working or dwelling, the local people's government shall provide him/her with equal conditions for receiving compulsory education. (Ministry of Education, 2009, article 12)*

The 2010 Outline of the National Medium- and Long-Term Education Reform and Development Plan further requires each local government to take responsibility for the compulsory education of children of the migrant population (Sun, 2012). In 2015, about 80% of migrant children enrolled in free public schools during the nine-year compulsory education stipulation (Ministry of Education, 2015). According to national statistics, *hukou*-based school segregation, along with other obstacles, appeared to be diminishing.

### ***Educational friendliness: The implementation of education policy in different cities***

The central government only gives recommendations of certain policies to local governments (Goodburn, 2009). "The concrete measures shall be formulated by the provinces, autonomous

regions and municipalities directly under the Central Government (Ministry of Education, 2009, article 12). The implementation varies between provinces and cities.

Migrant children are nonetheless subject to rigorous *hukou* constraints while attending the free public school system due to administrative impediments and budgetary limits imposed by local authorities (Goodburn, 2009). One of the important reasons would be that the capacity of some public schools is far less than the number of migrant children (Hu & West, 2014). Therefore, local governments have to ease some strict standards to limit the number. According to Du (2012), while enrolling in a public school in Beijing, only migrant families are required to provide numerous official documents, such as migrant workers' employment permits, temporary residency permits, and apartment leases from the district. Some districts have more detailed requirements, including paying social insurance to the place of residence after a year. Some areas also give preference to those whose parents own houses in that area rather than children of parents who do not (Du, 2012).

Generally speaking, the longer the period of migration, the more stable the occupation and the higher socioeconomic conditions, the easier it is for migrant families to obtain the relevant documents. However, these requirements are usually the threshold for migrant parents, as they typically work as temporary laborers in cities without legal employment status (Liu et al., 2016). Many scholars have attributed the standard of schooling for migrant students to the lack of financial capacity of local governments (Li, 2009; J. Zhou, 2006). The implementation of the policy would not be rewarded by the central government. On the contrary, accepting more migrant children into school would increase the financial burden on local governments (Li, 2009; J. Zhou, 2006).

Moreover, at the school level, there are some factors that influence the implementation of education policies. Hu and West (2014) interviewed 10 principals and teachers and found that the most important factor is the examination results. The education system in China has been regarded as an examination-oriented system (Li, 2009). This means that the achievement of students is deeply related to the reputation of the school and the career prospects for principals, as reflected in the regulation published by local governments. At the same time, the number of migrant children greatly exceeds the capacity of schools, especially in areas with a high concentration of migrant families. Coupled with the emphasis on academic achievement, some schools have to set tests for migrant children to select students with good grades (Hu & West, 2014).

Currently, the two main types of admission policies for migrant children in China's cities are the "points-based admission system" and the "material admission system." The points-based admission system refers to the placement of school-age children in public schools from highest to lowest according to the points accumulated by the migrant families according to certain conditions. The material admission system means that the migrants must meet the material qualifications contained in the policy; then their children can enroll in the local school.

In 2018, large- and medium-sized cities began to "compete for people" by lowering or even relaxing the threshold for getting a local *hukou*, promoting the "citizenship" of the migrant population (Ren, 2018). In this process, educational services for migrant children have also become more friendly and have regional characteristics (Zhu et al., 2020). The friendliness of education services is mainly reflected in the admissions and enrollment

policies. The more educational friendliness, the fewer the documentation and conditions required from parents to enroll their child in school. Zhu et al. (2020) analyzed the texts of admission policies of 16 cities considering the degree of difficulty for migrant families in meeting the conditions. They found that Hangzhou, Shenzhen, Xi'an, and Lanzhou are the most educationally friendly cities. Xiamen, Shanghai, Tianjin, and Beijing are the cities with the highest admission standards for children of migrant populations.

Many major cities have relaxed their entry requirements for the nine years of compulsory education, but migrant children still face unstable education circumstances. In the later stages, without a local *hukou*, most children are unable to participate in high school entrance exams and national college entrance exams. They have no option but to attend vocational school or go back to their hometown adapting to new circumstances.

### ***Institutional inequality, school segregation, and academic ability***

The educational inequality is largely attributed to institutional inequality, which is related to *hukou*-based school segregation. *Hukou*-based school segregation has been a notable feature of China's current education system. School segregation is reflected in two situations.

The first is the segregation between public and migrant schools, where current figures show that 20% of migrant children still attend migrant schools nationwide (Wei, 2022). As the proportion of migrant children attending public schools increases, segregation between public schools with a good reputation and low-ranked public schools is beginning to occur. As local authorities gradually abolish migrant schools in favor of public schools, which are set up to cater for the children of migrant workers to complete their compulsory education. The standards of these schools are lower than those of public schools with high rank. In many cases, these schools are attended by migrant children whose parents are employed in the primary or secondary industry. In an exam-oriented education system, the differences in teachers, parents' emphasis on children's education, as well as differences in the children's own exam abilities, have led to new form of school segregation between these low-rank public schools and schools with a good reputation and strict entry requirements (Hu & West, 2014). The impact of this school segregation is reflected in two aspects: the difficulty in enrolling in public school and, taking a step further, poor academic performance.

Liang and Chen (2007) found that the enrollment rate of migrant children was less than of native children, especially for temporary children. Wu and Zhang (2015) had the same finding. They compared migrant children with left-behind children and local children to examine the impact of *hukou* on their school enrollment. It was not surprising that rural migrant children were disadvantaged in enrolling in public schools. However, their opportunities to enroll in schools were even less than those of the left-behind children in rural areas. The researchers argued that institutional barriers created by the *hukou* system are the basis of this phenomenon.

In Goodburn's (2009) case study, he reveals that migrant parents who wish to enroll their school-aged children in local schools fail to complete the additional standards that are specifically tailored to them. It is still possible for some temporary migrant children to enroll in public schools, if their parents are willing to pay "education endorsement fees" (*zanzhu fei*) (Liang & Chen, 2007). This kind of fee may range from ¥1200(\$180) to more than

¥8000(\$1,200) a semester (Goodburn, 2009), which may be a huge burden, especially for those low-income migrant households. For them, it is difficult for them to meet the additional requirements of the regulation, which prevents children from accessing schools through the normal channels. The cost of the education endorsement fee is another requirement for these families. The institutional obstacle of *hukou* reduces access to better education for migrants.

The segregation caused by institutional barriers continues to influence migrant children in terms of learning outcomes deeply related to their future. According to Lu and Zhou (2013), migrant children who are segregated in migrant schools perform worse than equivalent migrant peers in urban public schools. However, there is little difference between native students and migrant students in the same school. They applied segmented assimilation theory to understand the environmental factors deeply associated with migrant students' academic development. Their study, however, was only conducted in particular districts in Beijing and was confined to migrant students in two types of schools. By employing data from the Chinese Education Panel Survey (CEPS), Xu and Wu (2016) classified students into four categories: urban locals, rural locals, urban migrants, and rural migrants. The results showed that significant school segregation promotes local students (particularly urban locals) while harming migrant students. Unevenness and exposure, two dimensions of school segregation, leading to disparities in academic achievement.

Some researchers take the opposite position, and have recently shown that migrant children perform well. Using secondhand data from the China Family Panel Survey (CFPS), Jordan et al. (2014) found that migrants and non-migrant were at about the same level. This view was supported by Xu and Xie (2015). Analyzing the data from the CFPS, they discovered that migrant children perform quite well compared with their native counterparts in a number of areas of life. Yet, Ma (2020) criticized the two studies for ignoring the differences in the implementation of *hukou*-based policies in different cities. Meanwhile, their studies were based on CFPS operationalized school segregation at the individual level, such as educational performance, political knowledge, subjective well-being, time studying, height, and weight, without considering multilevel contexts, such as schools and cities.

The Chinese central government implemented a series of reforms to adjust the *hukou* system and provide more equal educational opportunities for migrant children (Xu & Wu, 2016). Nevertheless, it is worth noting that local governments have the power to adjust their local *hukou* and residence policies based on their local development plan (Goodburn, 2009). It is not difficult to find that education policy for migrant children has shown strong regional characteristics (Zhu et al., 2020). Despite many cities issuing more inclusive policies, municipalities such as Beijing, Shanghai, and Tianjin continue to restrict migrant children in education policy in the name of controlling population (Ma, 2020). Therefore, Ma (2020) differentiated between municipal cities and non-municipal cities based on CEPS. The municipal cities are defined as four cities, including Shanghai, Beijing, Tianjin, and Chongqing. The central government has direct power over these cities. In addition to these four cities, other urban areas are defined as non-municipal cities. The finding supported the conclusion that migrant children performed worse than local peers in municipalities. However, in non-municipal cities, the academic performance of migrant students and their urban peers was at the same level. Therefore, the influence of migrant status on achievement is larger in municipal cities (Ma, 2020).



School segregation, from the view of social closure, is a kind of exclusion in which different groups compete for educational resources, resulting in unequal school education (Fiel, 2013). Some cities have enacted more discriminating laws to prohibit nonlocal students from accessing free public schools in order to ensure resources for local kids (particularly urban local students) (Xu & Wu, 2016). This theory can explain why some cities are very restrictive toward migrant students and become less educationally friendly (Xu & Wu, 2016).

### ***The impact of other factors on the academic ability of migrant children***

As discussed above, the more stable the occupation and the higher the socioeconomic conditions, the easier it is for migrant families to enroll their children into urban public schools, decreasing the impact of *hukou*-based school segregation between public schools and migrant schools. Detailed research has also shown that family socioeconomic status (SES) is a significant determinant of children's school achievement as a reflection of ability (Ma et al., 2018)

Family SES is usually measured using multiple dimensions, including household income, educational level, and parents' occupation (Luo et al., 2016). Guo (2011) found that family SES associated with other family characteristics impacts students' math scores. Migrant students from low-income families tend to get poorer results than those from high-income families. Based on social capital theory, family and school social capital have a mediating impact on migrant children's achievement. The atmosphere of the neighborhood and school is strongly related to family SES (Wu et al., 2010). In addition, parental support and engagement during learning time is an important factor among high-achieving migrant students (Fang et al., 2017). Parents' expectations toward children's academic performance, parental assistance at home, and established connections are key in children's education. The research in this aspect was usually conducted at family level.

Institutional school segregation is usually measured at the school level, while the studies focusing on family SES were normally conducted at the micro-family level. Some research looked at both familial disadvantages and institutional impediments to explore educational inequality in China. Ma et al. (2018) agreed on the performance gap between migrant and non-migrant students. The main explanation is the different types of schools, that is, public and migrant schools. Family SES and parental involvement is beneficial in improving achievement, but they do not completely eliminate the achievement gap between migrant children in migrant schools and native urban children. Combining multilevel modeling and field research, Gu and Yeung (2019) noted that, although migrant parents have high aspirations, their relatively lower SES hinders migrant students' performance at family level. Meanwhile, migrant students are disproportionately placed in less favorable school settings because of the segregation system. The combination of high aspirations and formidable barriers encountered by migrant children affects their academic ability in complex ways (Gu & Yeung, 2019).

Based on the above-mentioned literature, the following hypotheses are put forward:

H1. Students' migrant status and school types are statistically associated with academic ability.

H2. Family SES is statistically associated with academic ability.

H3. Migrant children and their urban peers have smaller scores gaps in those provinces with lenient education policies.

### **3. Methods and data**

For this study, quantitative data from CFPS is used. CFPS is a national longitudinal general social survey project conducted in China since 2010. This survey was conducted by the Institute of Social Science Survey (ISSS) at Peking University (Xie et al., 2017).

The project aims to capture social, economic, demographic, educational, and health changes in China (Xie et al., 2014; Xie & Hu, 2014, as cited in Xie et al., 2017). CFPS focuses on the Chinese people's economic and noneconomic well-being, including substantial topics, such as educational achievement, family connections and dynamics, population movement, and health (Xie et al., 2017).

In this section, I introduce the data, methods, and operationalization of theoretical concepts and control variables.

#### ***Data***

In this study, I particularly used the data collected in 2018. The sample of CFPS is drawn from 25 provinces/cities/autonomous regions in China. The population of these 25 Chinese provinces/cities/autonomous areas (excluding Hong Kong, Macao, and Taiwan) accounts for 95% of the overall Chinese population (Xie et al., 2017). Therefore, CFPS may be considered a sample representation (Xie et al., 2017).

The baseline of the CFPS survey interviewed 14,960 households, including 33,600 adults and 8,990 children, for an approximate response rate of 81% (Xie et al., 2017). The CFPS implemented probability-proportional-to-size sampling (PPS) to ensure that its sample represented 95% of the total population of China in 2010. In three stages—counties, communities, and households—CFPS sampled the Chinese population as a whole rather than utilizing previous sampling methods that separated urban and rural areas. Therefore, the sample covers rural, urban, and migrant populations (Xie et al., 2017).

The main CFPS questionnaire consists of five categories: village questionnaire, household questionnaire, family questionnaire, children's questionnaire, and adult questionnaire. In this survey, a person under 16 years old is considered a child. From the 2010 baseline, the child questionnaire included two sections: proxy questionnaires, completed by the child's guardian for children aged 0 to 10, and those aged 10 to 15 answered by themselves (Xie et al., 2017).

In this study, children aged 10 and 15 were my main target group because they attend primary schools and middle schools with the distinction between public school and migrant school. They answered the questionnaire by themselves, which let us know their information directly. Moreover, compared to the previous survey, in the 2018 survey, there are two databases at the individual level: the person database for individuals aged 10 years and over

and the parent proxy database for children aged 0-15 years (child proxy database). The proxy questionnaire is a condensed version of the self-response questionnaire. Therefore, proxy questionnaires and child self-responses questionnaires can be cross-referenced for completeness of information. There were 1,771 cases in the target group after cleaning up the missing values for each data item and censoring the instances that didn't fit.

### ***Measurement***

In this study, the academic ability was the dependent variable. It was measured by a standard cognitive test in the survey. The cognitive test includes word tests and mathematics tests. The children completed the test under the supervision of an investigator. Also, this test only was completed during offline visits. Therefore, there were some missing values when the questionnaire was completed by telephone. I used the final score provided in the database.

The original design of the word and mathematics tests used different starting points according to the educational level of the respondent. In the word test, there are a total of eight groups of questions of equal level. Thirty-four Chinese characters comprise a group. They are shown in the test from easiest to hardest. Respondents were randomly assigned to a group of questions. Children in primary school started from the first character; those in junior middle school started from the ninth. The test ended if they could not recognize three characters in a row or they finished the thirty-fourth character. There were four groups of mathematical problems at a similar level, and each group had 24 problems. As with the word test, primary school students started from the first; junior middle school students started from the thirteenth. In order to provide a more accurate estimate of the respondents' cognitive level, if the respondent answered the first question incorrectly, he/she was allowed to try again from a lower starting point. The score was assigned based on the number of the most difficult questions that had been answered correctly. If the respondent did not give any correct answers, the number of the question before where he/she started would be the final score. Therefore, the minimum score of both tests is 0. The maximum is 34 in the word test and 24 in the mathematics test. One respondent can score a maximum of 58 points.

Migrant status is the key independent variable. It was measured by the question "Where is the child's current registered address?", "Current place of residence classified as urban and rural according to the National Institute of Statistics" as well as their *hukou* status and the question of whether the child has lived with their parents for more than six months. Therefore, I clarified three types of children's status. Migrant children are defined as those living in an urban area with a rural *hukou* registration, including rural-to-urban intra-province, urban-to-urban cross-province, and living with parents for more than six months. Similarly, urban local children were those living with an urban local of *hukou* and rural locals were those living in the rural areas with rural *hukou*. The distribution of different kinds of children across provinces sees Table 1.

**Table 1 - Percentage of Migrant status of children across provinces**

	Migrant status		
	Rural local	Migrant	Urban local
Anhui	0.8%	1.8%	1.3%
Beijing	0.0%	0.2%	0.7%
Chongqing	0.7%	1.1%	0.7%
Fujian	1.7%	2.6%	1.0%
Gansu	20.0%	11.6%	6.9%
Guangdong	8.3%	13.6%	10.9%
Guanxi	4.0%	4.4%	2.3%
Guizhou	4.8%	1.3%	0.7%
Heibei	7.1%	5.7%	3.9%
Heilongjiang	0.7%	3.1%	4.9%
Heinan	16.3%	15.6%	15.1%
Hubei	0.3%	2.0%	2.6%
Hunan	1.1%	3.7%	3.0%
Jiangsu	0.1%	1.8%	4.3%
Jiangxi	4.4%	2.6%	2.0%
Jilin	1.2%	0.4%	1.3%
Liaoning	4.5%	5.0%	5.9%
Shaanxi	1.4%	2.4%	2.0%
Shandong	3.8%	5.7%	4.9%
Shanghai	0.1%	1.5%	16.4%
Shanxi	4.6%	2.2%	3.0%
Sichuan	8.7%	6.6%	2.0%
Tianjin	0.5%	0.2%	1.6%
Yunnan	4.4%	2.9%	0.7%
Zhejiang	0.7%	2.0%	2.0%

School segregation was operationalized using school type as another independent variable. The division of migrant schools and public schools is used in the questionnaire to test the extent of school segregation. I establish four categories based on migrant status and school enrollment: non-migrant children (in public schools), migrant children in public schools, those in migrant schools, and rural children in public schools. To test the distinction between urban children and migrant children, rural children were only included in descriptive analyses and not included in the regression model.

Other independent variables include family characteristics. Students who enter public schools instead of migrant schools may imply a more affluent family background or a stronger desire to invest in their child's future; both would also be the cause of better outcomes. Therefore, I also used family income, and parents' education to measure family SES. Family income is calculated using information from the 2018 CFPS and comprises five sources of income: salary, business, assets, transfers, and others (Jordan et al., 2014). Parents' education is their years of completed education. To further consider their investment in children's education, tutoring time and school expenditure were included. Tutoring time is the sum of the amount of time parents spend tutoring their child's homework and the amount of time the child is involved in extracurricular tutoring. I controlled the children's characteristics. The measures of child characteristics were the child's age and gender.

Local variables were measured using a typology of high-educationally friendly cities and low-educationally friendly cities (Zhu et al., 2020). I adopted the research results of Zhu et al. (2020). Since CFPS only provides information by provinces, according to Zhu et al. (2020), I classified Zhejiang, Guangdong, Gansu and Shaanxi as provinces with lenient

education policies, Jiangsu, Shandong, Sichuan and Hubei represented areas with moderate education policies, Beijing, Shanghai, Tianjin, and Fujian were included into regions with strict education policies.

### ***Methods***

After forming the independent and dependent variables, I ran two descriptive analyses of the relevant variables of migrant status, including the control variables. The first one included the differences between rural locals, migrants and urban locals. The second analysis will further include the type of school. Then, I used linear regression models as the main analysis strategy. The first two regression models included migrant status and school types, family SES and all control variables to compare the differences across the three groups of children as I concluded above. Then I added the region context and interaction effect between migrant status and regional characteristics into the models to see whether students' test scores are moderated by provincial educational policies.

Because many of the variables I use in my regression models are nominal/categorical, I record them as dummy variables. The reference groups were urban children, those who are aged 10 and 11 years old and the household income group from 0 to ¥24,000 (\$0 - \$3,575) a year.

## **4. Results**

### ***Descriptive Statistics for Selected Variables***

Results in Table 2 are presented by migrant status. Migrant children account for 25.7% of the overall sample size and 17.1% of children with a local *Hukou* in the city. Rural locals' scores are lower on average, although the largest proportion at 57%, only scored 33.71 in the test. Urban locals scored 39.14 on average, much higher than the 35.6 of migrant children. Age and gender did not differ significantly between the three groups, which suggests the test score differences were not made by physiological differences. In terms of household income, in the past 12 months, urban households earned ¥113,100 (\$168,474), more than twice as much as rural households, which earned ¥48,600 (\$7,240). Migrant families also gain more opportunities and have achieved multiple enhancements through mobility, earning ¥74,500 (\$11,100), but there is still a certain gap between them and urban families.

Migrant parents are far less educated than local urban parents. Mother's educational attainment is highest among urban local families, which is consistent with the research of Jordan et al. (2014). Only 4.4% of mothers in rural households have a high school education or higher, compared to 14.7% in mobile households and 55.6% in urban households (see Table 3). Hours of tutoring represent the ability of parents to guide children's studies and the time to be with their children. Higher levels of parental education imply that they are more likely to be involved in their children's educational activities. Tutoring by parents was more common among urban local children (4.18 hours) than among migrant children (3.46 hours). After-school tutoring indicates parental investment in their children's education and is largely relevant to educational expenditures. Migrant households spend ¥1,000(\$150) less than urban

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children, while urban children are significantly more likely to receive more after-school tutoring.

**Table 2 - Descriptive Statistics for selected variables by migrant status**

	Rural local (N=1011)		Migrant (N=456)		Urban local (N=304)	
	Mean	SD	Mean	SD	Mean	SD
Total score	33.71	9.91	35.6	9.10	39.14	7.62
Gender(male=1)	0.54	0.50	0.51	0.50	0.51	0.50
Age	12.35	1.67	12.31	1.69	12.43	1.63
Total income for the past 12 months(Thousands)	48.6	53.36	74.5	70.46	113.3	97.09
Father's Highest Education	2.85	1.55	3.45	1.46	4.24	2.06
Mother's Highest Education	2.39	1.84	3.24	1.76	4.52	1.77
Hours of tutoring per week	2.38	4.02	3.46	4.80	4.18	4.79
Schooling expenditures in the past 12 months	1918.24	2798.45	1731.37	2789.56	2989.98	7077.09
After-school tutoring per week	1.32	4.99	2.29	6.69	3.96	7.22

**Table 3 - Percentage of maternal education level in different children's groups**

	Middle school and below	High school degree	Tertiary degree
Rural local(N=1011)	95.6%	3.5%	0.9%
Migrant (N=456)	85.3%	9.9%	4.8%
Urban local(N=304)	44.4%	26.3%	29.3%

I next differentiated the sample by school type. The number of migrant children in migrant schools is relatively small (N=18). Since some respondents did not answer all the questions during the survey, I have to delete some cases with missing values. The average score for children in migrant schools was 38.11, which is at odds with the view in many studies that children in migrant schools will perform worse than their peers in public schools. They scored just below urban children on the test and much higher than migrant children in public schools. This could be caused by the small sample size and a broad range of performance of this group of youngsters, with scores ranging from 48 to 27, as well as the fact that there were more children in the upper age groups, resulting in higher average scores.

For children attending migrant schools, their family income is lower than that of migrant children attending public schools. However, their families spend much more on education - nearly ¥ 10,000(\$1500) last year alone. There is little difference in after-school tutoring between migrant children in migrant schools and migrant children in public schools, which implies that the gap in education spending is reflected in school fees. This is in large part due to the fact that migrant schools are not funded by the government. The school has to charge a relatively high tuition fee to keep the school running. In contrast, public schools have local government funding, both in rural and urban areas. Despite the lower quality of public schools in rural areas, these rural local children are able to receive compulsory education with lower tuition fees. Meanwhile, the family economic circumstances of migrant children in the public school were better than those in the migrant schools. This is also in line with the previously mentioned idea that higher socioeconomic conditions make it easier for migrant children to meet the requirement for enrolling in public school.

**Table 4 - Descriptive Statistics for selected variables by school types**

	Rural children in public school (N=1043)		Migrant in migrant school (N=18)		Migrant in public school (N=426)		Urban children in public school (N=284)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total score	33.97	9.93	38.11	7.27	35.29	9.11	38.93	7.73
Gender(male=1)	0.54	0.50	0.61	0.50	0.5	0.50	0.5	0.50
Age	12.37	1.68	12.44	1.65	12.28	1.67	12.4	1.64
Total income for the past 12 months (Thousands)	51.4	56.53	63.4	52.61	73.93	71.25	110.2	97.16
Hours of tutoring per week	2.45	4.14	2.11	3.66	3.50	4.80	4.14	4.59
Schooling expenditures in the past 12 months	2322.26	4362.20	9777.78	6964.66	1321.64	1596.86	1678.43	3666.67
After-school tutoring per week	1.49	5.52	2	4.94	2.17	6.23	3.76	6.82

### *Regression analysis*

I first ran two multiple linear regression analysis models to test the 3 groups of children. In the first model, I excluded the tutoring hours and educational expenditures and the second one includes them in order to observe whether additional tutoring and input, in addition to family SES, would help their performance.

Model A has an  $R^2 = 0.469$ . The model explained about 47% of the variance of the dependent variable. Model A showed that the standardized regression coefficient on migrant children in public schools was  $-0.131$  ( $p < .001$ ). Migrant children enrolling in public school were worse than their urban peers in academic ability. Therefore, Hypothesis 1 is accepted.

In Model B, I added tutoring hours and educational input in the mode to supplement the effect of family SES and external factors that could help them to achieve better test results. The inclusion of tutoring hours and schooling expenditures explained an extra half a percentage point of variance on the total score ( $R^2 = 0.474$ ). Model B showed that extra educational input would have a statistically significant increase in prediction ( $=0.07$ ,  $p < 0.05$ ). Extra tutoring hours were negatively associated with students' academic ability, although the negative coefficient ( $=-0.043$ ) is not significant. With the inclusion of extra educational input variables, the standardized regression coefficient changed from  $-0.131$  to  $-0.134$  for those migrant children in public schools.

Among the demographic and SES variables, children's age and family total income were positively associated with test scores. Compared to those aged 10 and 11, children aged 12, 13 ( $=0.475$ ,  $p < .001$ ) and 14, 15 ( $=0.685$ ,  $p < .001$ ) were more likely to have better scores. When a child reaches the age of 14 or 15, there is a relative increase of 13.1 points compared to the age of 10 or 11. It is easy to understand that the older a child is, the more he or she can understand and learn, and the more knowledge he or she can acquire. The monthly income group from ¥24,001 (\$3,575) to ¥40,000 (\$6,000) ( $=0.093$ ,  $p < .05$ ) and from ¥94,001 (\$14,000) and ¥800,000 (\$120,000) ( $=0.134$ ,  $p < .01$ ) were statistically significant, compared to the group from 0 to ¥24000. A 2.1 point improvement in performance would result from a shift in household income to the next group. From the data, it can be seen that household income was positively related to an increased likelihood of better test scores. Mother's education was also positively associated with a higher test score. An increase of one in the mother's educational level leads to a grade rise of 0.54 points. This evidence shows that higher parental education and household income would be beneficial to children's studies. Thus, by observing the evidence of these findings Hypotheses 2 is accepted.

**Table 5 - Summary of Regression Analysis for Variables Predicting Test score**

Variable	Model A		Model B	
	$\beta$	Std. E	$\beta$	Std. E
Type (ref group: urban local)				
migrant in migrant school	-0.005	1.582	-0.036	1.73
migrant in public school	-0.131***	0.533	-0.134***	0.534
Gender (male=1)	-0.022	0.477	-0.020	0.478
Age (ref group: 10,11 years old)				
12,13 years old	0.484***	0.569	0.475***	0.57
14,15 years old	0.707	0.593	0.685***	0.605
Total income for the past 12 months (ref group: income=0-24000)				
income=24001-40000	0.088*	0.942	0.093*	0.946
income=40001-55000	0.043	0.992	0.048	0.992
income=55001-94000	0.062	0.9	0.067	0.905
income=94001-800000	0.132**	0.915	0.134**	0.924
Father's Highest Education	0.001	0.149	0.009	0.149
Mother's Highest Education	0.119***	0.158	0.108***	0.158
Hours of tutoring per week			-0.043	0.031
Schooling expenditures in the past 12 months			0.07*	0

a. Dependent variable: Total score

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Built on Model B, I then added the region indicator into model C to test if the result shows regional differences. The overall regression was significant ( $F(15, 711) = 43.591$ ,  $p < .001$ ,  $R^2 = 0.479$ ). Compared to those living in provinces with stringent education policies, children living in provinces with moderate policies ( $= -0.092$ ,  $p < 0.05$ ) and lenient policies ( $= -0.109$ ,  $p < 0.05$ ) tend to have worse scores. The difference in test scores between migrant and urban children in public schools was reduced ( $= -0.121$ ).

Then, I tested the interaction effect between migrant status and regional characteristics in the model. To further investigate whether the effects of migrant status and school type on students' test scores can be moderated in areas with different policies, I include a "cross product" of these two variables in the regression model to test whether there is a moderating effect. The regression coefficients were shown in Model D. Figure 1 plots the interaction effects using predicted values for a better visual presentation of the data. It shows that in the three types of regions, migrant children's performance was worse than that of their local peers. Although the interaction effect itself was not significant, in some provinces with strict education policies, the difference between migrant children and their local peers in the public schools was reduced. Their test score gap narrowed from 3.35 points and 2.83 points respectively in the lenient policy areas and moderate policy areas to 2.21 points in the strict region. Contrary to my expectations, the gap between the scores of migrant and urban



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children is even wider in areas where the government has developed more lenient education policies. Therefore, it is possible to reject Hypothesis 3.

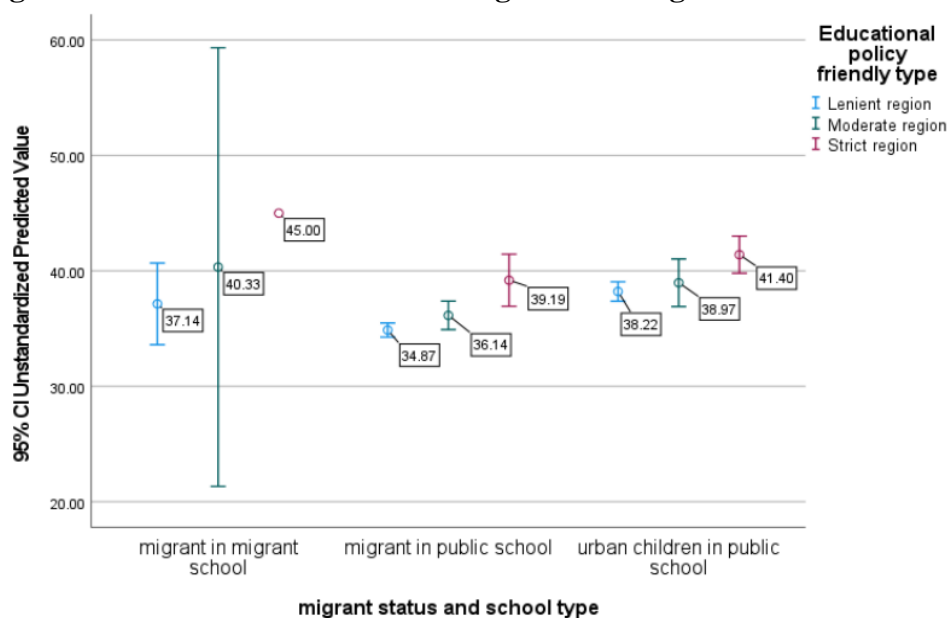
**Table 6 - Summary of Regression Analysis for Variables Predicting Test score**

Variables	Model C		Model D	
	$\beta$	Std. E	$\beta$	Std. E
Type (ref group: urban local)				
migrant in migrant school	-0.031		-0.054	
migrant in public school	-0.121***		-0.058	
Gender (male=1)	-0.023		-0.023	
Age (ref group: 10,11 years old)				
12,13 years old	0.473***		0.474***	
14,15 years old	0.683***		0.683***	
Total income for the past 12 months (ref group: income=0-24000)				
income=24001-40000	0.92*		0.092*	
income=40001-55000	0.048		0.049	
income=55001-94000	0.064		0.064	
income=94001-800000	0.11*		0.111*	
Father's Highest Education	0.009		0.008	
Mother's Highest Education	0.113***		0.114***	
Hours of tutoring per week	-0.044		-0.043	
Schooling expenditures in the past 12 months	0.068*		0.075*	
Educational policy of residence (ref group: stringent provinces)				
moderate provinces	-0.092*	0.989	-0.052	
lenient province	-0.109*	0.851	-0.096	
a migrant in a migrant school and living in a moderate region			0.032	7.838
a migrant in a migrant school and living in a lenient region			0.007	6.965
a migrant in a public school and living in a moderate region			-0.077	2.111
a migrant in a public school and living in a lenient region			-0.056	1.76

a. Dependent variable: Total score

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Figure 1. The Interaction Effect of Region with Migration Status on Test score**



To exclude regional differences due to economic factors, I did some tests. In this research, I further developed three classifications of 12 provinces based on their economy. Here, I use the ranking of GDP per capita to represent their economic power (Mo, 2019). Thus, there are three types of regional economies: strong, moderate, and weak. Then, I looked at the differences between this classification and my regional classification on education policy. The result shows that there is a relatively large overlap between provinces with stronger economies and those with stricter education policies, while the other two classifications are more distinct (see Table 6). About half of the provinces did not fit the same pattern. To further verify that regional differences in education policy are less associated with their economic development, I replaced the original area classification with the new one and added it to the regression model. The finding revealed that the score gap between migrant and urban children is biggest in low-income regions (2.1 points), while it is least in moderate-income areas (1.42 points). When further looking at the average level of children in some of the provinces that did not fit this pattern, the average scores of children in Jiangsu and Guangdong were the worst, those in Zhejiang were moderate, those in Hubei, Sichuan and Fujian were the best. Therefore, the influence of economic factors is to some extent excluded.

**Table 7 - Provinces based on different classification criteria**

	Education policy	Economy
Beijing	strict	strong
Shanghai	strict	strong
Tianjin	strict	strong
Fujian	strict	moderate
Jiangsu	moderate	strong
Shandong	moderate	moderate
Sichuan	moderate	weak
Hubei	moderate	weak
Zhejiang	lenient	moderate
Guangdong	lenient	moderate
Gansu	lenient	weak
Shaanxi	lenient	weak

## 5. Discussion and conclusion

### *Discussion*

As internal migration becomes a popular topic in China, their contribution to urban society is increasingly appreciated. However, they are not fully included in the public service and welfare system. Migrant children, along with their parents moving into cities, should be guaranteed equal opportunities by the central education policy. With the different implementations of the education policy, the situation of these migrant children varies. This study aimed to investigate some aspects of migrant children in their compulsory education and mainly answer two questions. First, how do policies in different provinces affect the relationship between children's migrant status and their academic ability? Is the score gap

between migrants and non-migrants narrower in those cities with less strict education policies? By using the secondary data from CFPS, this study found that students' migrant status and school types do have an impact on their academic ability. Moreover, this kind of impact increases when a region conducts some lower standard education policy.

Prior studies have noted the importance of migrant status and its impact on children's school ability and achievement. The first finding of this study is consistent with these studies. I relate this finding to the second finding that family SES is positively associated with children's test achievement. In the process of urbanization and internal migration, migrant families receive greater access to work and economic prospects by migrating to cities and getting educated. However, there is still a gap between these families and local families. They do not have equal access to many public services due to the *hukou* system. Due to budgetary and administrative impediments and a shortage of good teachers, it is difficult to accommodate all migrant children in public schools, which implies the scarcity of educational resources. Therefore, public schools have to select eligible migrant children by applying double standards to migrant families. Most of the selection criteria posted by schools come from government-issued policies. Generally speaking, the more competition there is for education resources, the more stringent the local government's education policies are. As discussed by D. Xu and Wu (2016), to safeguard the benefits of citizens with local *hukou*, local governments have reasons to enact higher standards for migrant families, which implies a segregation policy.

The final finding of this study is that in some areas where stricter education policies have been enacted, the score gap between migrant and local children has become smaller, although migrant children still perform worse than their peers. Instead, in some areas where there are no higher requirements for migrant children to attend school, the gap between them and their peers is larger. This finding is contrary to my hypothesis. Possible explanations for this are as follows. Due to the higher admission standards, the families of migrant children who are able to attend school have backgrounds comparable to those of their classmates. The family background is characterized by parents with a high level of education, stable employment and property ownership. Moreover, tests are set up to select the better performing migrant children for admission. Hu and West (2014) found that migrant children did better in the admission selection test and otherwise their family had to pay extra fees than local students to enter the school. In general, in areas where education resources are scarce regional authorities and schools tighten their education policies, particularly in terms of enrolment, to ensure that children with a local residence have priority in school, especially when enrolling the schools with good reputation. Migrant children who meet the admission criteria are among the better pupils in this group in terms of overall family background and achievement. Therefore, this could explain the reason why in the area with strict education policies, the score gap between migrant children and urban locals is narrowed compared to those in regions with lenient ones.

These kinds of different standard education policies are deeply rooted in the whole *hukou* system, which divides people into different categories. The aim of the *hukou* system is to control the resource distribution (Ma, 2019). With the reform and opening up, the economic development has reduced the impact of *hukou* on internal migration. Since 2010, a series of *hukou* and education reforms have been released, which further relaxed this system

(Sun, 2012). However, to date, it is still a feature of people's daily life, affecting education, medical care, housing and other aspects. For large cities, in particular, the *hukou* serves as a condition to protect locals from having greater access to social benefits. Beijing and Shanghai, the largest cities in China, each have a total population of over 20 million, with around 40 percent of the population coming from other provinces, identifying as a migrant (Ning, 2021). These cities and provinces have a greater incentive to implement stricter *hukou*-based policies to ensure the proper functioning of the welfare system. Education policy is only one part of the *hukou* system that is affected. In many areas, the compulsory education law has encouraged local authorities to enable migrant children to complete primary and junior secondary school during the compulsory education period, although with different restrictions. As mentioned above, without a local *hukou*, most migrant children are unable to enroll in high school or participate in national college entrance exams. They have to choose whether to attend vocational school or go back to their hometown earlier, adapting to new circumstances, which has been a new issue in China called returning children. Overall, when we discuss the effect of education policy and school segregation on migrant children in China, we have to link it to the full picture of the *hukou* system.

There are some directions to further study. Firstly, in the research, I categorized 12 provinces into 3 categories based on the level of their education policy. The finding suggested that with the level of policy increasing, the final score of children has become higher. Although I have excluded the influence of economic factors on the regional divisions, it is inevitable that three of the four regions with strict education policies, Beijing, Shanghai and Tianjin, are indeed the most economically developed regions in China (Mo, 2019). The economic strength of these areas has a strong correlation with higher levels of learning for children. Strong educational resources and teaching capabilities, along with parental investment in their children's education would increase the children's eventual academic performance. It is hard to totally exclude the influence of the economy and only focus on their migrant status. Further study could reconsider the operationalization of these concepts.

Secondly, it is interesting to look at the spatial school segregation in a district or county. Although it has been verified that the score gap between children in these areas has narrowed. However, we cannot ignore the fact that the gap between migrant and local children due to school segregation still exists. In many areas, good schools are concentrated in neighborhoods with high housing prices, while poorer public schools are more likely to be concentrated in areas with more migrant families. In this study, I have only divided the region by province and lacked small-scale validation. In future studies, it is likely that more detailed data and more regular results will be obtained if the regional divisions can be further narrowed down to districts to look at spatial school segregation.

Finally, because of the new issue of returning children, the timing of the migration is of interest. In this study, as in many previous studies, I have not been able to take the duration of migrant children into account in the analysis, which is limited by the source of the data. It may be useful in future studies. For example, in this study migrant children are defined as those whose *hukou* registered address does not correspond to their current residence address, and only their *hukou* status is taken into account. However, there are also migrant children who are born and raised in the local city and differ from local children simply by having or not having a local *hukou*. It is, therefore, necessary to consider other factors in addition to the

*hukou* status to define a migrant child. After the inclusion of the duration of migrant factor, in addition to cross-sectional comparisons between migrant children and their peers, it is also worth comparing how migrant children behave in the city and how they behave when they return home.

### ***Conclusion***

This study focused on the educational inequality between migrant children and urban children in China, reflected by academic ability. This study believed that this kind of inequality is caused by double-standard education policies through school segregation. Previous studies have argued whether migrant children perform worse than urban children or whether they have caught up with their peers. This study has tested that there is an educational disparity between migrant children and their local peers by using the secondhand data from CFPS and adding the region variables. I categorized three types of regions based on their education policy and added them as dependents variables in the linear regression analysis.

The following key conclusions can be drawn from this work. Migrant status can affect children's academic ability and overall migrant children perform worse than their peers. This disapproved of some scholars' finding that migrant children and non-migrant were at about the same level. Secondly, family socioeconomic status is statistically associated with test scores, which is consistent with previous research. Finally, regional differences have an interacting effect on the migrant status and ability. In the region where they implement strict *hukou*-based education policies, the score gap between children of migrants and urban locals is the smallest. Moderate education policies and lenient policies mean that provinces' policies can help migrant children have greater chances to enroll in public schools. However, the results showed that in these areas, their score gap became bigger.

Finally, this research faces some limitations. The first limitation concerns the operationalization of academic ability. The main concept of academic ability is measured using only the test score as the independent variable, which is provided directly in the database. Test scores consisting solely of word recognition and math test may not fully reflect their learning and understanding ability. This is due to the lack of questions about other types of knowledge in the CFPS survey, such as English and a direct reflection on school performance. It is also difficult to reflect on parents' perceptions of their children's academic performance as they only answer it as excellent, good, moderate and poor.

The second limitation is in relation to the measurement of school segregation. Due to lacking data on the quality of the school, I can only distinguish between public schools and migrant schools. After completing the data cleaning, the final results showed that only a small number of cases were attending migrant schools. This leads to large errors in migrant schools. In order to further understand the mechanisms of school segregation, it would be useful to have data on school ranking and more cases in migrant school.

Thirdly, because CFPS hides information about the district and city in order to protect the information of the respondents and only shows the codes, I could not categorize the data at the municipal level. I ended up having to expand to the provincial level for categorization. This leads to the problem that, in addition to the four municipalities having a unified

education policy, there are also different regional education policies within the province. Therefore, it may be the biggest flaw in this study.

Fourthly, although I controlled for certain personal characteristics, there are still some possible factors that might affect the final result and students' scores haven't been considered.

Despite these limitations aforementioned, the findings of this study still have practical significance. From a policy perspective, the findings of this study suggest that current education policies still have restrictions placed on migrant children. In different regions, education policies play a different role in the gap between migrant and local children. In a broad sense, it is hoped that in the future, policies to protect their rights and those of the next generations could be on the agenda. While we all recognize that the *hukou* system and other welfare policies based on it are unlikely to disappear suddenly, the system of dividing people by *hukou* should be dismantled as society evolves. It is important for the next generation that all children have equal access to education in a competitive society. Local governments should desegregate the system based on *hukou* status. Moreover, policies need to help migrant children become more integrated into public schools. They should also strive to improve the quality of teaching in schools with a large number of migrant children, so that they can also receive a quality education. This could help migrant children to improve their ability and develop more effectively in the future.

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## Appendix



### CHECKLIST ETHICAL AND PRIVACY ASPECTS OF RESEARCH

#### INSTRUCTION

This checklist should be completed for every research study that is conducted at the Department of Public Administration and Sociology (DPAS). This checklist should be completed *before* commencing with data collection or approaching participants. Students can complete this checklist with help of their supervisor.

This checklist is a mandatory part of the empirical master's thesis and has to be uploaded along with the research proposal.

The guideline for ethical aspects of research of the Dutch Sociological Association (NSV) can be found on their website ([http://www.nsv-sociologie.nl/?page\\_id=17](http://www.nsv-sociologie.nl/?page_id=17)). If you have doubts about ethical or privacy aspects of your research study, discuss and resolve the matter with your EUR supervisor. If needed and if advised to do so by your supervisor, you can also consult Dr. Jennifer A. Holland, coordinator of the Sociology Master's Thesis program.

#### PART I: GENERAL INFORMATION

Project title: One childhood Two direction: School Segregation on Migrant Children's Education in urban China

Name, email of student: Yijing Wang, 601320yw@student.eur.nl

Name, email of supervisor: Tom Emery, tom@odisseei-data.nl

Start date and duration: 01.04.2022 – 04.08.2022

Is the research study conducted within DPAS

YES - NO

If 'NO': at or for what institute or organization will the study be conducted? (e.g. internship organization)

# SCHOOL SEGREGATION ON MIGRANT CHILDREN'S EDUCATION

## PART II: HUMAN SUBJECTS

1. Does your research involve human participants.

YES - NO

*If 'NO': skip to part V.*

If 'YES': does the study involve medical or physical research?

YES - NO

*Research that falls under the Medical Research Involving Human Subjects Act ([WMO](#)) must first be submitted to [an accredited medical research ethics committee](#) or the Central Committee on Research Involving Human Subjects ([CCMO](#)).*

2. Does your research involve field observations without manipulations that will not involve identification of participants.

YES - NO

*If 'YES': skip to part IV.*

3. Research involving completely anonymous data files (secondary data that has been anonymized by someone else).

YES - NO

*If 'YES': skip to part IV.*

v. 1.1 (September 2020)

# SCHOOL SEGREGATION ON MIGRANT CHILDREN'S EDUCATION

## PART III: PARTICIPANTS

1. Will information about the nature of the study and about what participants can expect during the study be withheld from them?  YES - NO
2. Will any of the participants not be asked for verbal or written 'informed consent,' whereby they agree to participate in the study?  YES - NO
3. Will information about the possibility to discontinue the participation at any time be withheld from participants? YES -  NO
4. Will the study involve actively deceiving the participants?  
*Note: almost all research studies involve some kind of deception of participants. Try to think about what types of deception are ethical or non-ethical (e.g. purpose of the study is not told, coercion is exerted on participants, giving participants the feeling that they harm other people by making certain decisions, etc.).*  YES - NO
5. Does the study involve the risk of causing psychological stress or negative emotions beyond those normally encountered by participants? YES -  NO
6. Will information be collected about special categories of data, as defined by the GDPR (e.g. racial or ethnic origin, political opinions, religious or philosophical beliefs, trade union membership, genetic data, biometric data for the purpose of uniquely identifying a person, data concerning mental or physical health, data concerning a person's sex life or sexual orientation)?  YES - NO
7. Will the study involve the participation of minors (<18 years old) or other groups that cannot give consent?  YES - NO
8. Is the health and/or safety of participants at risk during the study? YES -  NO
9. Can participants be identified by the study results or can the confidentiality of the participants' identity not be ensured? YES -  NO
10. Are there any other possible ethical issues with regard to this study? YES -  NO

If you have answered 'YES' to any of the previous questions, please indicate below why this issue is unavoidable in this study.

*I will use second-hand data from CFPS 2018. Therefore, the participants in this survey did not know to get involved in this study. However, their personal information has been made anonymous.*

What safeguards are taken to relieve possible adverse consequences of these issues (e.g., informing participants about the study afterwards, extra safety regulations, etc.).

*I will delete the data as soon as possible if I finish my study.*

v. 1.1 (September 2020)

## SCHOOL SEGREGATION ON MIGRANT CHILDREN'S EDUCATION

Are there any unintended circumstances in the study that can cause harm or have negative (emotional) consequences to the participants? Indicate what possible circumstances this could be.

*No, there are no possibility to cause harm to the participants.*

*Please attach your informed consent form in Appendix I, if applicable.*

*Continue to part IV.*

*v. 1.1 (September 2020)*



# SCHOOL SEGREGATION ON MIGRANT CHILDREN'S EDUCATION

## **PART IV: SAMPLE**

Where will you collect or obtain your data?

*I will request data from Peking University Open Research Data.*

*Note: indicate for separate data sources.*

What is the (anticipated) size of your sample?

*My sample will be around 8 thousand.*

*Note: indicate for separate data sources.*

What is the size of the population from which you will sample?

*I will sample around 8 thousand.*

*Note: indicate for separate data sources.*

*Continue to part V.*

*v. 1.1 (September 2020)*

**Part V: Data storage and backup**

Where and when will you store your data in the short term, after acquisition?  
*I will store my data in my private computer for digital data files. I will delete them as soon as my research is finished.*

*Note: indicate for separate data sources, for instance for paper-and pencil test data, and for digital data files.*

Who is responsible for the immediate day-to-day management, storage and backup of the data arising from your research?

*I will be responsible for the data management, storage and backup of the data.*

How (frequently) will you back-up your research data for short-term data security?

*I will back-up the data every time after every analysis.*

In case of collecting personal data how will you anonymize the data?

*I will use second-hand data, which has been already anonymized. I will keep the data in separate, password-protected file, which will not be publicized. No information is used which may lead to the identification of the data.*

*Note: It is advisable to keep directly identifying personal details separated from the rest of the data. Personal details are then replaced by a key/ code. Only the code is part of the database with data and the list of respondents/research subjects is kept separate.*

# SCHOOL SEGREGATION ON MIGRANT CHILDREN'S EDUCATION

## **PART VI: SIGNATURE**

Please note that it is your responsibility to follow the ethical guidelines in the conduct of your study. This includes providing information to participants about the study and ensuring confidentiality in storage and use of personal data. Treat participants respectfully, be on time at appointments, call participants when they have signed up for your study and fulfil promises made to participants.

Furthermore, it is your responsibility that data are authentic, of high quality and properly stored. The principle is always that the supervisor (or strictly speaking the Erasmus University Rotterdam) remains owner of the data, and that the student should therefore hand over all data to the supervisor.

Hereby I declare that the study will be conducted in accordance with the ethical guidelines of the Department of Public Administration and Sociology at Erasmus University Rotterdam. I have answered the questions truthfully.

Name student: 汪依婧

Name (EUR) supervisor: Tom Emery

Date: 20.03.2022

Date: 20.03.2022

