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A study on the impact of the 'Double Reduction' policy on the parenting styles and anxiety levels of parents of Grade 5-6 students in Guangdong, China

Zixian Fan
MSc Education (Research Design and Methodology)
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Abstract

This research evaluates the double reduction policy impact on parenting styles and anxiety levels of parents of Grade 5-6 students in Guangdong, across different SES groups. The mixed method design is adopted, including thematic analysis, factor analysis and regression analysis. Among different levels, the city acts as an intermediating channel through which the policy impact differs across household characteristics. In tier 1 cities, due to the large education system and the legacy of shadow education, the competition for education resources remains fierce, so parents are more likely to feel anxious and will more commonly rely on intensive parenting, as a response. Outside the tier 1 cities, the double reduction policy has significantly relieved the competition in the education environment. After the external competition pressure is eased, parents are more inclined to return to their intrinsic parenting ideas, and the education anxiety is to some extent reduced.

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Introduction

1.1 Introduction

Back in May 2021, I accompanied a group of Grade 5 students from Guangzhou, China, to spend a weekend at the local botanical garden. During the afternoon session, more than half of the children dropped out as they each had to hurry to attend hours of private tutoring. Typically, they said, their weekends were full of homework, interest classes and subject tutoring. What surprised me more was that parents and children were all accustomed to such an amount of burden and a full schedule, whereas it was not so common when I was in primary school. The change in how primary school students spend their time outside of school struck me. Watching the reluctant look of the children leaving the botanical garden, I asked their parents why they arranged so much tutoring for their children on weekends. I still remember one sentence parents answered: "It is to provide better education for my child."

"Better education."

-- What is a better education? Or more importantly, how do parents define good education? I can't help but wonder when a good education is equated with participation in more tutoring classes, when the definition of educational success is confined by academic performance, and when children are heavily scheduled from pupil ages, is that really a better education that parents want? It aroused my interest in understanding education from the perspective of parenting.

In July 2021, an unprecedented reform of educational policy took place in China, which was later widely called ‘Double Reduction’. As its name, the two reductions refer to both the reduction of the homework burden and the reduction of afterschool subject tutoring during the K-12 stage. Now, for-profit institutions cannot tutor core subjects like Chinese, math and English. It invokes a turbulence in education industry as millions

of tutoring institutions have to suspend due to the policy restrictions. In the meantime, parents and schools need to adjust to the new education system where the heavy afterschool arrangement for children is no longer encouraged. Whether the policy will ease primary school students' leisure burden, may depend on whether it can improve parents' parenting ideas and educational anxiety levels. In the context of grade 5-6 of primary schools in Guangdong Province, this dissertation used a mixed research method to evaluate the short-term policy impact on parents' parenting styles and educational anxiety levels, and whether the double reduction policy impact is heterogenous across parents' socioeconomic status (SES).

1.2.1 Shadow Education in China

Private tutoring is widely known as 'shadow education' because it imitates the official education system and designs courses according to the school curriculum (Bray, 1999). In some cases, the 'shadow' has even extended beyond the official curriculum it mimics, and itself became an important force shaping the education system (Zhang & Bray, 2018). In China, two main forms of shadow education have been recognized. The first form acts as a supplementary role to the official curriculum, for which its purpose is to bolster student's mastery of knowledge through reviewing courses or previewing before class. The second form is more expansive, which courses are designed to equip students with more advanced abilities for admission to prestigious universities (Zhang, 2020). Both two forms are considered as channels where extra educational resources are distributed.

Shadow education is widespread across China and many primary school students have spent time in additional tutoring in recent years. As early as 2004, a survey of 4772 families showed that 73.8% of pupils in cities participated in extracurricular courses (Xue & Ding, 2009). Another survey found that in some big cities like Shenzhen and Wuhan, the participation rate of grade 5-9 students exceeded 75% (Tang, 2009). The trend was further accelerated by urbanization. From 1978 to 2018, the urban population

rate increased from 17.9% to 59.6%, for which the migration flocking into cities created a densely populated market for tutoring agencies (Eryong, Xue & Li, 2022). According to *the Report on the Development of China's New Educational Undertakings* (2017), the nationwide participation rate of subject tutoring for primary school students was 33.4%, and in some area such as northeast China, the participation rate was more than half. In 2018, the number of tutoring institutions exceeded 0.4 million, which means that the number of tutoring institutions in the country has already doubled the total number of primary and secondary schools (0.21 million). By 2021, China becomes the country with the most extensive shadow education (Fan, 2021).

1.2.2 Inequal Distribution

Covered by the huge volume of shadow education, the distribution of shadow education is highly unequal both geographically and socially. *The Report on the Development of China's New Educational Undertakings* (2017) shows that northeast China had the highest shadow education participation rate of 60.8%, followed by eastern China (38.1%), central China (38.0%) and western China (30.5%). The participation rate of urban students (44.8%) is more than double of their rural peers (21.8%). In addition, in tier 1 cities such as Chongqing and Shanghai, students who immigrated with their parents from other provinces (without local residential status, which can lead to restrictions on access to schools, medical care, etc.) were less likely to receive tutoring than students with local residential status (Zhang, Wei & Bray, 2015).

Besides geographical inequality, another concern about shadow education is its high degree of marketization, which may further deepen the uneven distribution of educational resources across families with different SES (Eryong, Xue & Li, 2022). According to the 2017 China Education Finance Family Survey data, the higher the mother's education level, the higher the family expenditure on Children’s education. Zhang & Bray (2021) also found that in China, the probability of participating in tutoring was positively correlated with the household income, mother’s education, and

father’s education. Therefore, it is highlighted in the double reduction policy document (2021) that education is a public utility, afterschool education can only serve as a beneficial supplement and should not become a tool of the capital market to pursue profits.

1.3.1 Double Reduction Policy

On July 24, 2021, The General Offices of the CPC Central Committee and The State Council issued the *Opinions on Further Reducing the Homework Burden and Off-campus Training Burden of Students in Compulsory Education* (2021), marking the beginning of the double reduction policy. To be specific, the policy rules prohibit non-subject training institutions from engaging in subject tutoring, stipulate that those engaged in subject tutoring should have corresponding teacher qualifications, and subject tutoring institutions should be registered as non-profit institutions. The average length of written homework for grades 3-5 is not allowed to exceed 60 minutes per day, etc.

The double reduction policy is a continuation of China's appeal for reducing students’ burden over the past few decades, but it is more aggressive than ever. Appendix 1 introduces some of the landmark policy efforts in history. The focus of burden reduction policies has gone through the transformation from standardization of teaching ways, to reducing the frequency of exams, and then to the reconstruction of education ecology (Long, 2021). Before 2018, policy attempts to reduce the burden were mainly implemented by the Ministry of Education. In 2018, four ministries and commissions, including the National Development and Reform Commission, jointly rolled out a policy document to reduce extracurricular burdens. This multi-faceted cooperation reflects the government's increasing attention to reducing the educational burden (Zhang, 2019). By 2021, the double reduction policy marked that the intensity and coverage of the reform reached the peak of all kinds of burden reduction policies in history. Reducing students' academic burden becomes one of the top priorities in the

development of education systems (Li, 2021).

1.3.2 Related Policy in Guangdong

This study is conducted in the context of Guangdong Province, which has introduced some specific supplementary policies for the double reduction. Some of the important provincial supplementary policies are reviewed below.

1) After-School Service

On July 26th, 2021, the Guangdong Provincial Department of Education stipulated that from the autumn semester of 2021, schools of all levels and types of compulsory education in Guangdong province should achieve two 'full coverage' of after-school services: full coverage of primary and secondary schools, as well as full coverage of students. Schools are required to provide after-school services five days a week, with after-school services lasting at least two class hours each day.

2) Reduction of Exam Pressure

In January 2021, the Education Department of Guangdong Province jointly issued *the Implementation Plan of Burden Reduction for Primary and Secondary School Students in Guangdong Province* (2021). Primary schools are not allowed to organize exams more than twice in each term. Moreover, the publication of students' scores and rankings in any form is now strictly prohibited, which used to be common before.

3) Equalizing the Junior High Schools

Before the equalizing policy, at the end of primary school, students were required to take a selection test. Good junior high schools selected the top students according to their grades.

The Implementation Plan of Burden Reduction for Primary and Secondary School Students in Guangdong Province (2021) proposed that any form of ability selection is strictly prohibited for junior middle school admission. Entrance to junior high schools should strictly depend on students' demarcated service area scope. If the number of applicants is higher than planned, a computer lottery will be used for admission.

To further equalise junior high schools, some cities in Guangdong, such as Zhaoqing and Shenzhen, have introduced measures to collectivize schools into groups. A 'group' is usually composed of some advanced schools and some backward schools. Within the group, teachers and administrators will exchange in turn, education webinars are held regularly to achieve the goal of balancing educational resources.

1.4 Research Questions

The promulgation of the double reduction policy has compressed the space of shadow education and objectively created a relaxed external environment for families to ease their educational burden. However, if parents do not change their parenting styles and anxiety level, they will still rely heavily on afterschool tutoring. In this sense, whether and to what extent the double reduction policy can achieve its intended outcomes depends on the extent of parents' cooperation. Therefore, this research will mainly focus on parents of grade 5-6 primary school students in Guangdong, to evaluate short-term policy impact centring on the following three research questions:

1) Does the policy change the family's parenting styles? If yes, how?

2) Does the policy change parents' educational anxiety? If yes, how?

3) Does the policy impact differ across households with different socioeconomic statuses (SES)?

Literature Review

In the following section, literature about the role of shadow education, parenting styles, anxiety levels and South Korean burden easing policies is reviewed.

2.1 Role of Shadow Education

Understanding the social function of shadow education will help interpret what creates the demand and how the constraints on supply might influence parents of different SES. From the functionalist perspective of society, analyzing the function of a social existence starts from analyzing the roles it played in the society. Such roles are usually split into manifest function and latent function (Giddens & Sutton, 2013). Manifest function of shadow education, which means the intended role it plays, is no doubt the provision of supplementary or extended educational resources. Latent function of shadow education, which are the less known but existing roles, can be classified into three: (1) Access to cultural capital; (2) Booster for academic performance and (3) Positional goods.

2.1.1 Access to Cultural Capital

Cultural capital is the accumulation of knowledge, behaviour and skills that a person can utilize to demonstrate his cultural competence and social status (Bourdieu, 1973).

According to data from the Ministry of Education (2020, cited from Li, 2021), the middle school admission rate in many parts of China has dropped to 50% in recent years. In 2020, the admission rates of 985 universities and 211 universities (both are groups of key universities) were 1.9% and 5.2%, respectively. High scarcity of high-quality educational resources would intensify the competition. According to Bourdieu's (1973) theory of cultural capital, in modern Western society, gaining the cultural capital recognized by the system will be conducive for students to transform it into economic

and social capital through future work, so as to improve their SES. Similarly, in China, when students have access to better educational resources, they are more likely to achieve upward class mobility (Li, 2021). Shadow education has provided a way to supplement the cultural capital outside of school education and this is especially common in East Asia (Bray, 2017; Zhang, 2018). Meanwhile, although the family cultural capital theory holds that parenting takes place within the family, China's rapid urbanization has left many parents busy at work, including those themselves with little cultural capital. Shadow education externalizes such inheritance of cultural capital within the family to the tutoring institutions (Dong & Zhang, 2019). Shadow education has become an effective way to obtain cultural capital besides school education and family education.

2.1.2 Booster for Academic Performance

As an educational resource outside of school, private tutoring is seen by many parents as a booster for their children's performance. To be empirical, the influence of shadow education on learning has been studied in many countries. A study using data from PISA-2006 found that the impact of private tutoring on math academic performance was positive and increased linearly (Choi, et al., 2012). Studies conducted in Asian countries have found that tutoring may harm the achievement of secondary school students in Singapore (Cheo & Quah, 2005) but has a positive effect on the university entrance chances of Japanese high school students (Stevenson & Baker, 1992) and the reading achievement of Vietnamese primary school students (Ha & Harpham, 2005). If shadow education can boost academic performance, it will lead to a wider achievement gap between participants and non-participants, thus exacerbating inequality.

However, in the context of China, one study suggested that the influence of participation in tutoring on students' *Gaokao* (i.e., National College Entrance Exam, which is given only once a year and is virtually the only basis for college entrance) performance is complex. Zhang (2012), using a comprehensive dataset from China

collected in 2010, found that for the average urban student who attended an urban school and had high levels of private tutoring participation, private tutoring had little effect on *Gaokao* scores. However, English tutoring can significantly improve students' English scores in the *Gaokao* for urban low-achieving students or those whose English scores are in the lower quartile. For rural students, private tutoring has no positive impact on their academic performance (Zhang, 2012). Similar results are also found that math and science tutoring is more effective for underperforming students who use tutoring as a remedial plan than high-performing students who adopt tutoring as an enrichment strategy (Huang, 2014). Tutoring in any subject had positive effects on national average achievement without increasing the dispersion of student achievement (ibid., 2014).

Even though the real impact of tutoring may turn out to be mixed, the perception of tutoring's positive return greatly spread among parents. Few parents have read empirical literature on educational returns (Barro & Lee, 2010); but most people have a strong impression that the longer children stay in the education system, the better the quality of education and the greater the prospects for improving lifetime earnings and living standards (Bray & Lykins, 2012). The subjective perception of the positive impact of shadow education on academic performance creates a huge market for shadow education (ibid., 2012).

2.1.3 Positional Goods

Shadow education may be valued as a positional good, for which the main determinant of whether people think they are getting enough resources is whether the number of resources owned is sufficient relative to the resources possessed by their peers (Lee, Lee & Jang, 2010). Thus, the existence of tutoring intensifies the competition for educational resources, as the motivation to receive tutoring does not originate from real needs but endless comparisons (Liu & Dong, 2021). The richer the household, the more likely it is to participate in tutoring. Studies in Cambodia, Egypt, France and other

countries have found that parents with higher family income and education levels are more inclined to invest in shadow education (Hartmann, 2013; Oller & Glasman, 2013; Marshall & Fukao, 2019). At the individual level, the pressure for tutoring mainly comes from the high achievers, with the purpose of enrichment strategy, instead of the underperformers who value more the remedial function of tutoring. In China, Zhang & Bray (2021) found that students who perceived their ranking as above average were more likely to receive tutoring than students who reported a below-average ranking, after controlling for other variables. Studies in other countries in Europe and East Asia have also found that students who received tutoring are more likely to be those who already have a better academic performance but whose parents want them to have more resources to maintain a competitive advantage in school (Hatos, 2006; Koinzer, 2011; Bray, 2010). In comparison, Shadow education provides much less support to students who cannot find learning support in school (Dawson, 2010). The positional competition for better private tutoring further strengthens the existing patterns of inequality. If completely left to market forces, shadow education will maintain and aggravate the inequality of educational resources distribution.

2.2 Parenting Styles

In China, the general ideology of parenting is regarded to be characterized by overbearing tendencies and concerns about achievement outcomes (Zhou & Wang, 2019). As cultural, social and economic capital continues to diverge between SES, the internal differences in parenting ideology of different social classes also stand out. In this session, I will briefly review the general Chinese parenting characteristics, and then discuss the theoretical framework of Lareau (2002) of how a household's SES might cause different parenting strategies.

2.2.1 Chinese Mode of Parenting

In her 2011 memoir *Battle Hymn of the Tiger Mother* (2011), Amy Chua, a Chinese

American mother, raised her two daughters to attend Harvard University while also was criticized for her overly aggressive, outcome-driven parenting style. Zhou & Wang (2019) compared Chinese and Singaporean immigrant parents in the United States and found that Chinese immigrant parents generally have very high educational expectations, focusing on a narrower framework of success, such as grade point average (GPA). Tiger parenting, which concentrates on promoting school performance and strengthening social advantages intergenerationally, seems to be the stereotype of the Chinese mode of parenting (Carey. 2015). The formation of such characteristics is influenced by Confucian culture, the rise of credentialism and the expansion of education marketplaces.

Confucian traditional culture attaches great importance to education, believing that good education is the way to social upward mobility and the way to realize the maximum potential of a person (Lam, et al. 2002). Meanwhile, Confucian culture attaches great importance to family education, believing that parents are responsible for their children's intellectual, artistic, physical, social and ethical development (Yan, 2016; Zeng, 2001). In contemporary China, however, tiger parents spend far less time on such education. To some extent, the Confucian tradition of family education has been eroded by 'tiger parenting' and reliance on outside agencies (Zhang, 2020).

Credentialism refers to a social value system in which academic qualifications, such as high school diplomas and college diplomas, play an important role in gaining social status. In China's employment system, a high school diploma has become the main classification tool (Li, 2010; Vickers & Zeng, 2017). However, while credentialism reinforces Chinese families' belief in education’s value, it shifts the emphasis from genuine education to the acquisition of degrees (Lee, Lee & Jang, 2010).

Moreover, the tiger parenting style is further driven by consumerism and changing family structure. Before 2015, due to the one-child policy, Chinese family size was decreasing while wealth was increasing with economic development (Bray & Lykins,

2012). According to De Castro & de Guzman (2010), the amount of shadow education was inversely correlated with family size because parents will concentrate their resources on the only child to ensure making no errors. As the fertility rate of China (1.70 in 2019) is still under the replacement level (at 2.10) now (World Bank, 2022), it can be expected that nuclear family will remain to be the main form of Chinese family structures. Meanwhile, the consumerism of education challenges traditional social norms, which further aggravate parents' tiger parenting behaviors (Zhang, 2020).

2.2.2 Social Class Differences in Parenting

Even though the tiger parenting styles may be prevalent among families in China, the potential differences in parenting ideology among different social classes should not be ignored. According to Lareau (2002), social class matters to parenting strategies in the following two dimensions: (1) economic resources: for example, the affordability of afterschool activities, which can be measured by the household income; (2) educational resources: for example, the vocabularies used in daily communication, which can be indicated by parents' educational degree. It is worth noted that Lareau's framework is originally used to describe the class difference in parenting approaches in the U.S., therefore should not be simply copied and pasted in the context of Asian countries.

Due to the potential differences in intrinsic parenting ideas, Parents with different SES may have a different response to the double reduction policy as well. In this session, I will refer to Lareau's theoretical framework (shown in Appendix 2) of two parenting approaches, 'concerted cultivation' and 'accomplishment of natural growth', to discuss the potential social class difference in educational ideology in China.

a) Concerted Cultivation

In Lareau's framework (2002), the most prevalent parenting method of middle-class families is described as 'concerted cultivation'. This approach is featured by the

arrangement of family life centred on enriching children's leisure activities, which is concerted in the double sense of being ‘intensive’ and ‘joint’. First, it is intensive, because it organizes children's lives in a comprehensive, planned and development-oriented manner. Secondly, it is joint with the norms of mainstream institutions, and thus parents can gain social recognition (Bach & Christensen, 2021).

In China, Zhang (2020) found that the middle-class in Shanghai intensively adopts private tutoring, instead of well-organized leisure activities, to enrich children’s afterschool life. Ren (2013) described contemporary Chinese society as a ‘riskonomy’, in which the emergence and sustainability of the middle-class are constantly reconfigured and challenged, therefore the middle class is under the greatest social pressure and is most active in seeking educational opportunities for children. Compared with the higher class, middle-class families have stronger aspirations to achieve success within the national education system, instead of studying abroad. They are more likely to make deliberate and sustained efforts to get their children into elite institutions through intensive investment in private tutoring (Zhang, 2020). Therefore, ‘concerted cultivation’ in China is characterized by utilizing external resources as a supplement to help children succeed in the mainstream.

After the double reduction policy, as private tutoring for subject learning is no longer recognized by the government and society, the ‘joint’ feature of concerted cultivation will be removed. Whether middle-class families will change their parenting ideas correspondingly, is central to whether the policy can ease children’s burden. Thus, studying the policy impact on groups of 'concerted cultivation' is one of the central topics in this research.

b) Accomplishment of Natural Growth

Compared with middle-class, working-class parents are more likely to prefer the ‘accomplishment of natural growth’ approach (Lareau, 2002). It is characterized by

comparatively less intervention and lower educational expectations due to their economic struggles in life and lack of cultural capital. Parents provide the condition through which children can grow but leave leisure activities to children themselves. Working-class children internalize their parents' low educational expectations, so they were less likely to strive for elite schools (ibid., 2002).

This feature has also been witnessed in families of migrant workers and the working class in China. According to Zhang (2020), it is reported by teachers that students from working-class families had more disciplinary problems and were less motivated, and most of their parents were not highly involved. However, in China, even for those households with a monthly income of less than 5,000 RMB, 49.8% still had children participating in private tutoring according to Zhang's (2020) study. The parenting practice of lower-income families is still far from completely leaving their children to their own will. Later in the analysis, I will provide an explanation that competitive environments motivate parents with the 'accomplishment of natural growth' views to adopt intensive parenting strategies. Whether the double reduction will further externalize the lower expectations of working-class families into educational practice, is one of the key focus of this research.

2.3 Anxiety Levels

Alleviating the educational anxiety of students and parents is one of the primary goals of the double reduction policy. Before the policy, parents' educational anxiety led to a huge flow of family expenditures into shadow education. According to the 2018 Report of the Chinese Parent Education Anxiety Index Survey (Zhou, 2021), the proportion of parents anxious about their children's education was 68%, then by 2021, it is as high as 87.0%. The sources of parental educational anxiety include: (1) the stimulation of competition: 83.6% of middle school students were required by parents to rank top 15 within the class (Zhou, 2021); (2) The stimulation of tutoring markets: the way in which tutoring institutions advertise their services is hyping up the anxiety of parents; (3)

Demand for family capital: children's participation in various extra-curriculum activities put a requirement on family's social and economic capital, housing within the catchment area of a top school requires economic capital (Zhang & Bray, 2018).

Meanwhile, education anxiety varies with the SES of the family. The middle class has the greatest competitive pressure in social class mobility, the working class is often powerless, and the upper elite feels much less anxious as their status inheritance is less affected by their children's educational performance (Zhou, 2021). Therefore, this study will focus on whether there is a variation according to SES in the extent to which parents' anxiety levels changed after the policy was implemented.

2.4 Policy Against Shadow Education in South Korea

In the last session of the literature review, I will briefly review the efforts and outcomes of burden reduction policies in South Korea. For the last 50 years. South Korea implemented multiple policies to limit shadow education, and some policies were similar to the double reduction policy in China today. The contexts of the two countries are also rather similar. The education systems of South Korea and China are both influenced by the Confucian model, which is reflected that both countries have a rapid growth of tertiary education, high-stake exams at the end of schooling and a powerful central state controlling education system (Marginson, 2010). Therefore, South Korea is a suitable choice for comparative study with China. Although there are still fundamental differences between two countries, literature of South Korea can provide potential implications for China's policy impact.

2.4.1 Context

South Korean education used to be known for having the largest system of shadow education in the world, occupying 80% of the total government expenditure on public education in 2003 (Zhang, 2011). In South Korea, private tutoring participation is quite

high. About three-quarters of primary and middle school students attended private tutoring. Total expenditure on private tutoring amounted to 24 trillion won, or 2.79% of GDP, in 2006, shadow education had become a heavy educational burden for many families (Nam, 2007).

There are different views on the reasons for the emergence of a huge shadow education. One argument attributed the emergence of the shadow education market to the inadequacy of public education, however, South Korea spent 4.7% of GDP on public education in 2009, already higher than the OECD average of 4.0%, it cannot explain why South Korea had the largest shadow education (OECD, 2012). Therefore, the drivers of South Korea's shadow education may be rooted in deeper systemic problems, such as the existence of high-stakes tests and anxiety about class mobility (Choi & Choi, 2016). One idea is that shadow education is a market response to unified public education that cannot meet educational needs. When elite higher education is considered to have a high return, families with higher demand for education are more likely to choose extracurricular tutoring (Kim & Lee, 2010).

2.4.2 Policy Attempt

As shown in Appendix 3, South Korea has implemented several major measures to constrain shadow education over the past five decades. The aims of these policies can be broadly divided into four components: (1) prohibiting illegal private education; (2) equalizing schools to reduce the gap between schools; (3) improving the quality of public education; (3) reducing the financial burden on families by providing alternative forms of supplementary education (Lee, Lee & Jang, 2010).

These policy attempts are similar to the double reduction policy in China today in the following elements. First, the double reduction policy restricts discipline private tutoring, and South Korea legislated in 1980 to prohibit university students and school teachers from providing paid tutoring; Second, South Korea has implemented a series

of measures to improve the quality of public education and absorb the demand for shadow education since 2000; Double reduction policy requires schools to provide after-school services; Third, South Korea prohibited middle-school admission test since 1968, which in many provinces of China has also become a supplementary policy of the double reduction.

2.4.3 Policy Outcome

Although South Korea has never stopped its policy efforts to limit shadow education, most measures have not achieved the desired positive outcomes.

For example, in 2006, state education authorities imposed a restriction on operating hours of *hagwon* (for-profit private institute) in an attempt at reducing expenditure on private tutoring. Choi & Choi (2016) found that enforcing the curfew did not generate a significant reduction in the hours and resources spent on private tutoring. The results show that demand for private tutoring among students, especially high school students, is inelastic, as they are likely to regard private tutoring participation as indispensable towards the college entrance exams. High school students from low-income families have significantly increased their spending on one-on-one and small group tutoring (individual tutoring) when they need to drastically reduce their spending on *hagwon*. In contrast, high-income families appeared to be less affected by the intervention because they were already dependent on individual tutoring (ibid., 2016). The shift has increased the cost for many low-income families because individual tutoring is more expensive.

South Korea's 1972 high school equalizing policy also increased the demand for shadow education. Before the policy, students with good grades were admitted to better high schools through exams; After the policy, schools had to admit students randomly, therefore could not select students based on their academic performance. Mixing students randomly increased the dispersion of academic ability within school classes, hindered teachers' teaching, and lead students to seek shadow education as a

supplement (Kim & Lee, 2003). Kang (2007) found that the high school equalizing policy had a significant negative effect on shadow education expenditures of both grade 9 and grade 11 students.

Although the market of tutoring institutions inevitably shrunk under policies in South Korea, it does not mean that shadow education disappeared accordingly. Although the shadow education market aggravates the economic burden of most families and the academic burden of children, tutoring institutions actually provide easier access than individual tutoring. The double-reduction-like policies may indeed be pushing the subject tutoring market away from institutional tutoring but towards individual tutoring. According to a survey in China, up to 87% of parents said they would not give up their children's after-school tutoring due to the policy, and 37% reported that they would consider receiving individual tutoring as a replacement for the cram school (Eryong, Xue & Li, 2022). Compared with access to institutional tutoring, access to individual tutoring puts forward higher requirements for parents' economic and social capital, for example, the cost of individual tutoring is more expensive and the sourcing for private tutors requires information from parents' own network. It may form an invisible threshold which excludes students from families with lower SES. Therefore, in this research, I will try to analyze whether the policy impacts on students' participation in institutional subject tutoring, individual subject tutoring and interest class are heterogeneous across families' SES.

2.5 Summary

In essence, the demand for shadow education is a response to families' educational beliefs, such as whether they believe school education will guarantee success in high-stakes college entrance exams, and whether participation in private tutoring can relieve their anxiety about intergenerational mobility (Byun, 2010; Lee, Lee, & Jang, 2010; Sato, 2012). Therefore, the present study investigates the extent to which parents' beliefs and anxieties have changed after the implementation of the double reduction.

Methodology

3.1 Methodological Foundation

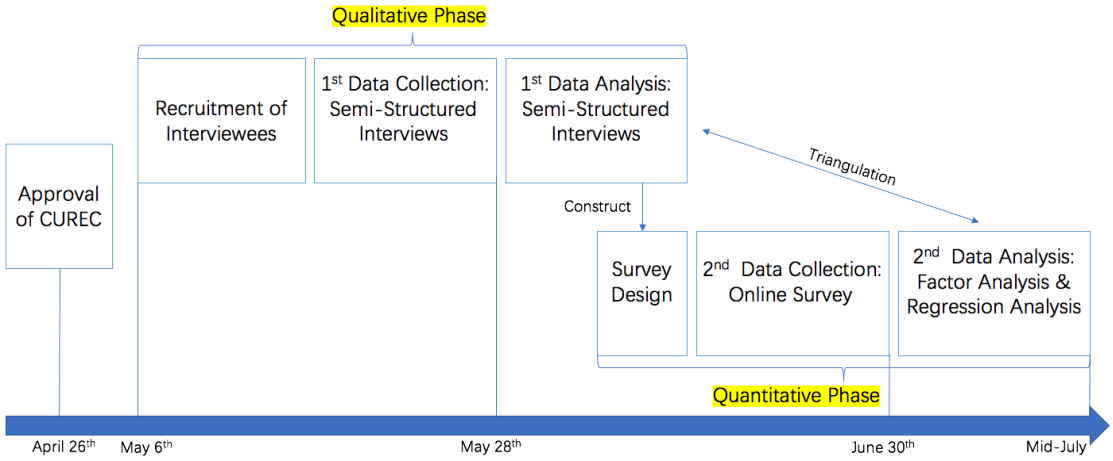
Following a pragmatic paradigm, this paper uses a mixed-method design to explore the short-term policy impact. The debate between positivism and interpretivism over the singularity of social reality is one of the central issues in ontological and epistemological studies. This difference in philosophical stance has also led to the debate on the superiority of the qualitative method and quantitative method. However, rather than defending dualism, the pragmatic paradigm offers a perspective that both objective and subjective knowledge should be valued and that multiple methods can be used simultaneously according to the specific research questions (Creswell, 2007; Creswell & Clark, 2011).

The mixed approach lends itself to the complexity of understanding parents' perceptions and responses to this transformative policy. It will benefit this research mainly by broadening the depth and breadth of research, as well as providing a triangulation between two methods. First, the use of a mixed method empowers investigators to answer research questions with sufficient depth and breadth (Enosh, Tzafrir & Stolovy, 2014). Two of the three main research questions in this paper are about parents' parenting ideas and anxiety levels, both are on the ideological level. Therefore, qualitative analysis, as a more appropriate tool for in-depth exploration, is suitable to be conducted to study such a subjective phenomenon which might vary among individuals (Teddle & Tashakori, 2009). In comparison, quantitative data analysis intends to enable researchers to generalize the findings to a larger population, therefore it helps answer the third question, namely whether policy impacts are different across SES in Guangdong's population (Zhang & Creswell, 2010). Second, since the double reduction policy is somewhat unprecedented in the Chinese context, there is no previous theoretical framework to measure parents' feelings and reactions to this change. Thus, inductive thematic analysis of qualitative data provides a tool to identify key themes in

a new research area, which later helps my quantitative analysis by incorporating identified themes into survey questions (Braun & Clarke, 2006). In conclusion, in the context of understanding the subjective attitudes of parents and studying whether identified patterns can be generalized to a larger population, the mixed method design performs better than using a single approach (Dawadi, 2021).

3.2 Research Design

Figure 1. Procedure Diagram



This research design adopts the 'connection' strategy of mixing procedure, defined by Zhang & Creswell (2010) as the form of mixing that one approach builds upon the findings of the other approach. As shown in the procedural diagram (Figure 1), the qualitative phase happened first, and then the quantitative phase were built on the themes derived from the qualitative analysis. In the qualitative phase, I interviewed 16 parents, 5 teachers and 2 tutoring practitioners by May 28th, in a semi-structured form. Inductive thematic analysis was then conducted to identify themes within the interview data. In the quantitative phase, I designed an online survey for parents based on the themes recognized from the qualitative stage. Through snowball sampling methods, I collected 1239 valid responses by June 30th. Quantitative data analyses were conducted to study whether the policy impact differs across parents with different SES, by comparing means and regression analysis.

3.2.1 Sampling Description

In this study, I am mainly targeting parents of students in Grade 5-6 (primary school, aged 10 to 12) in Guangdong province, China. In the meantime, teachers and tutoring practitioners of grades 5-6 will also be interviewed for the sake of triangulation. I refined the setting by two selection criteria: (1) Grade 5-6 and (2) in Guangdong province.

(1) Grade 5-6

In China, students must complete a nine-year compulsory education, including six years in primary school. Grade 5 and 6 are the final two years of primary education and represent a stage before the transition point into secondary school. It is argued by Bray & Lykins (2012) that demand for supplementary tutoring will reach the highest during the transition points in every stage. In addition, Grade 5 to 6 are important because students' scores are likely to gradually disperse as the difficulty of learning is rising at this stage.

(2) Guangdong province

The reason to choose Guangdong province as the geographical setting is mainly because it is where I come from, and therefore I am most familiar with its context. Guangdong is different from other provinces in many ways. In 2021, Guangdong has the highest GDP of any province in China (at equivalent to 1.93 trillion dollars) (National Bureau of Statistics of China, 2022). However, the development of cities in Guangdong is uneven. In 2019, seven out of 21 cities in Guangdong had a per capita GDP higher than the national average, while that of the remaining two-thirds was lower than the national average. Guangdong also has the largest number of immigrants among all provinces, at 29.3 million (National Bureau of Statistics of China, 2021). Therefore,

it should be noted that the results based on Guangdong Province may be contextually specific and cannot be referred to other settings in China.

3.2.2 Sampling Methods & Recruitment

The sampling strategy in this study was snowball sampling. Snowball sampling is defined as a nonprobability sampling method that future subjects are recruited through existing subjects' acquaintances (Parker, Scott & Geddes, 2019). The reason for adopting snowball sampling is that, with the limited time and resources for the dissertation, it is one of the best ways for the student investigator to reach a wide range of samples remotely.

I started recruiting interviewees for qualitative research on May 6th. I spread the advertisement (shown in Appendix 4a) through my network on WeChat, which is like the Chinese version of Facebook, and reached out to the first group of candidates. It must be recognized that my family and friends have been very helpful in forwarding the recruitment advertisement and recommending qualified candidates. The first group of candidates includes teachers and educators from different cities, it was through them that I reached a broader network of parents, which mainly consisted of their own students' parents and relevant acquaintances. Adhering to the idea of maximizing the diversity of interviewees, I settled down the final list: 16 parents, 5 teachers and 2 tutoring practitioners, which includes a wide range from counties to cities, from international schools to migrant schools, and from tier-1 cities to tier-3 cities. More descriptions of interviewees are shown in Appendix 5.

In the quantitative phase, I started the questionnaire survey data collection on June 10th. The recruiting method for survey data is also snowball sampling. The platform of the survey is Qualtrics. I spread the advertisement (shown in Appendix 4b) and survey link mainly through WeChat and the network I built during the qualitative stage. By the survey deadline of June 30th, after discarding unqualified survey responses (i.e.,

unfinished, children not in Grade 5-6 or not in Guangdong), I collected 1239 valid responses in total.

3.2.3 Data collection

(a) Semi-structured Interviews

In the qualitative phase, I used semi-structured interviews for data collection. A semi-structured interview is a form where a few pre-determined questions are given, while the rest of the questions are not planned in advance. Semi-structured interviews are considered to have the advantages of both structured interviews and unstructured interviews (Harding, 2018). First, research questions are somewhat standardized, it enables me to compare experiences across parents with different SES. Second, the unstructured section allows me to study interviewees in a more personalized way, especially since the policy is a new phenomenon and people's experiences can vary dramatically.

I sent the interview outline (shown in Appendix 6) one or two days ahead to inform the interviewees of the covered topics. Before each interview, I chatted with them casually on WeChat to build rapport and asked them to fill in the consent form on Qualtrics. Interviews are conducted via Tencent Meeting and recorded on my device (not on the cloud). While most interviewees only turned on the audio, I ensured that I turn on my video with an aim to build trust and provide some facial responses. At the beginning of each interview, I restated the research ethics and reminded the interviewees that they have the right to refuse response or quit at any time. Interviews generally went well; most interviewees showed a strong enthusiasm to share their opinions. Interviews vary in length from 25 minutes to 1 hour 15 minutes. In terms of languages, 2 interviews were conducted in Cantonese and the rest were in Mandarin. Transcriptions are conducted manually by the student investigator.

(b) Online Survey

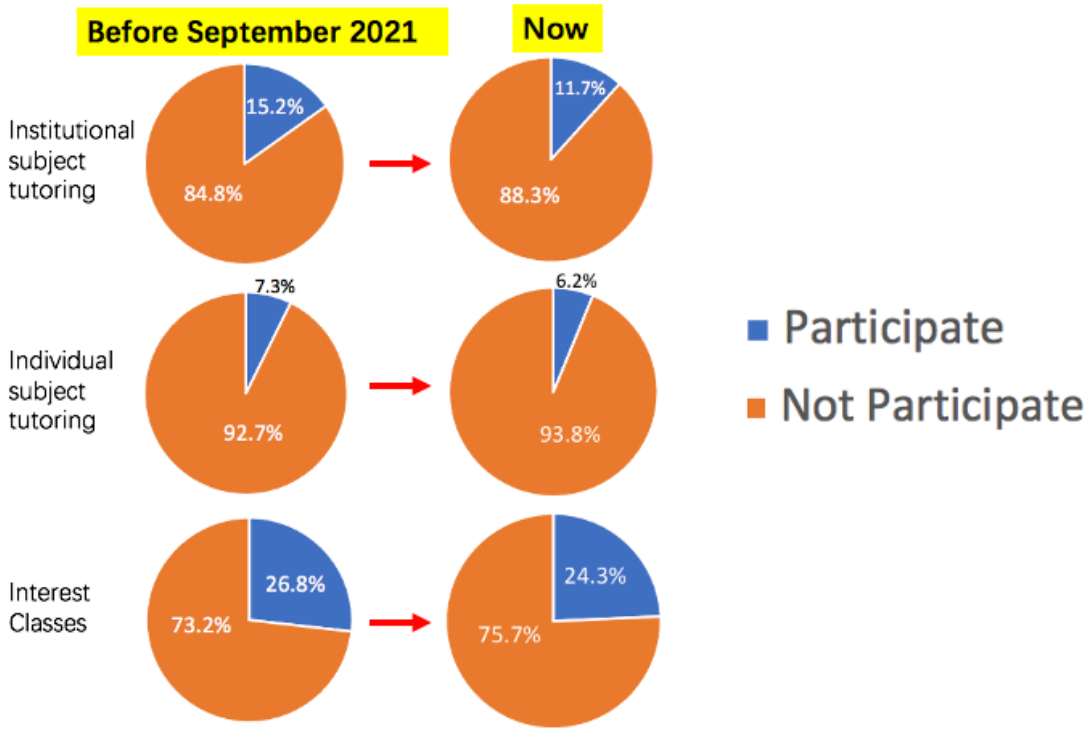
The target population of questionnaire survey was parent of Grade 5-6 students in Guangdong. Survey questions are shown in Appendix 7, which consisted of three main parts: background information, participation in tutoring and attitudinal factors. In the background information part, information about children (e.g., school type, grade ranks) and parents (e.g., occupation, educational attainment) are gathered. In the tutoring part, parents are asked about their participation in institutional subject tutoring, individual subject tutoring and interest classes before and after September 2021 (i.e., when the double reduction policy was implemented), measured by attended hours of tutoring per week. In the attitudinal factor part, questions are based on three constructs: 'parenting ideas' (e.g., expectation of children), 'anxiety level' (e.g., anxiety about children's education) and 'attitude towards policy impact'. Parents are asked to use the slider to show their attitudes, measured on the level of ratio scale to one decimal place, which way has the advantage of being intuitive and not restricting the analysis to ordinal techniques.

3.2.4 Descriptive Statistics

Appendix 8 reports the descriptive statistics of all variables in the survey data. Before September 2021, 60.6% of respondents reported their children had attended at least one kind of tutoring, close to the 65% participation rate in Guangdong province in 2017 as reported by the press (Yangcheng Evening News, 2018). As shown in Figure 2, after the double reduction, the participation rate decreased from 15.2% to 11.7% for institutional subject tutoring, from 7.3% to 6.2% for individual subject tutoring, and from 26.8% to 24.3% for interest classes. The average time spent on tutoring also slightly decreased for all three kinds of tutoring. Before September 2021, the mean hours per week spent on institutional subject tutoring, individual subject tutoring, interest classes are 0.51, 0.27 and 0.77, while the corresponding numbers now are 0.4, 0.25 and 0.77, respectively. The mean proportion of household income spent on

education is 29.7%, close to other previous findings of 30% (GuangMing Daily, 2018).

Figure 2. Participation Rates for Three Types of Tutoring, Before and After the Policy (N=1239)

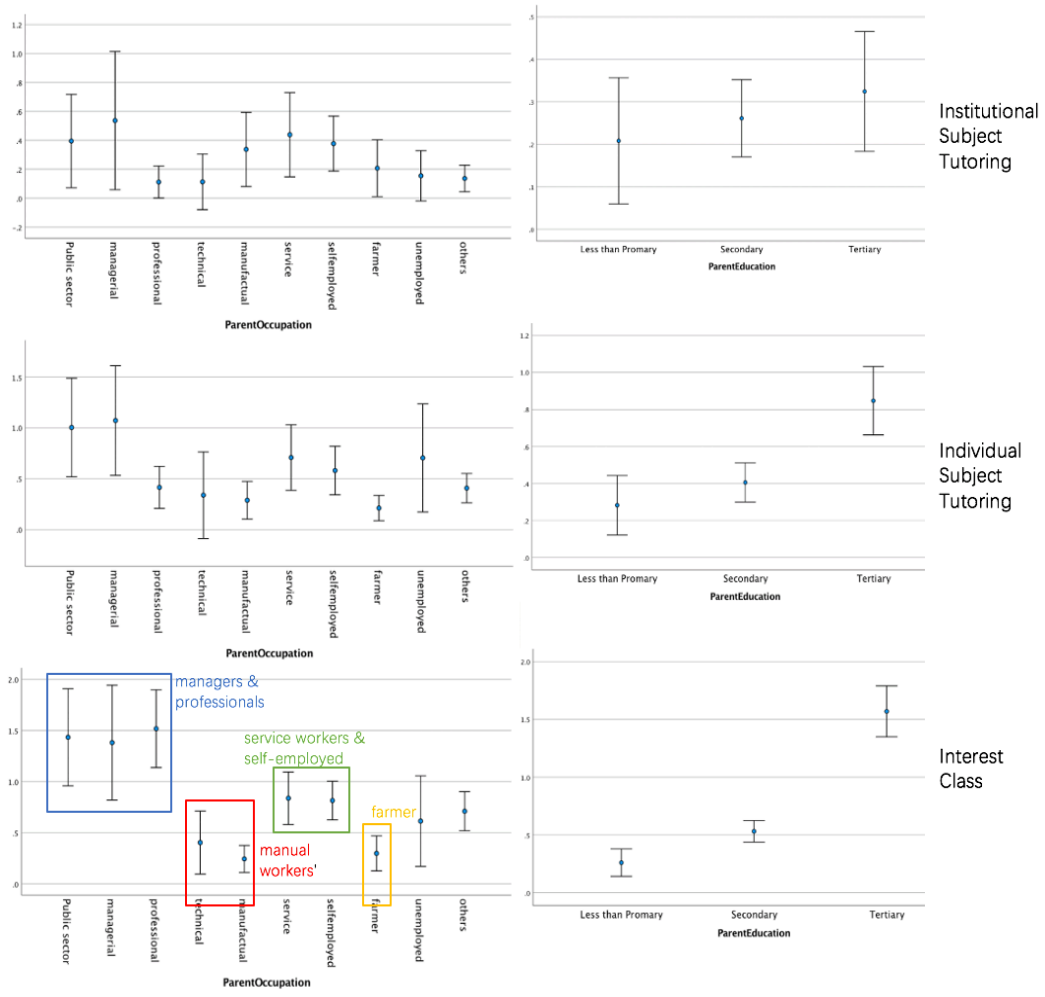


As for the parenting attitudinal variables, the means of most variables fall between the range of 1-2 out of the scale of 5, which means that on average parents have a relatively high educational expectation and an intensive engagement in children's life. The mean of the anxiety levels is 1.91, in the middle of the range from 0 to 4, representing a medium level of anxiety.

As an important component in this research, socioeconomic status (SES) is measured from individual characteristics. Three criteria commonly used to define SES: 'Income, Education and Occupation', are considered to be applicable in China's social context (Yu, et al. 2019; Qi & Wu, 2020). However, income remains a sensitive topic in China that people may be reluctant to disclose their income levels in surveys (Yu, et al. 2019). Therefore, income levels will not be recorded. Instead, parents' self-reported education levels and occupation are used to measure parents' SES backgrounds.

To group the occupation and education variables, error bars with 95% confidence interval are run on pre-policy participation in three kinds of tutoring, the results are shown in Figure 3. In terms of education, as can be seen from the bar chart of interest classes and individual tutoring participation, there are significant differences in tutoring behaviors among groups ‘less than primary’ ‘secondary’ and ‘tertiary’, so the original classification of parent’s education levels will be retained.

Figure 3. Error Bars of Pre-policy Tutoring Hours, grouped by parents’ education and occupation



With regards to the occupation level, the groups of ‘unemployed’ and ‘others’ will be firstly removed from the following study. The main considerations are as follows. According to the text replies, many choosing 'others' are housewives. At the same time, parents who choose 'unemployed' may not be the main source of household income, therefore these two options may not reflect their household SES. Secondly,

according to Figure 2, although there was no significant difference between occupations in the bar charts of institutional tutoring and individual tutoring, the bar chart of interest class shows clusters of some occupations. For example, 'public sector' 'managerial' and 'professional' are significantly higher than 'manufactural' and 'technical'. Therefore, four groups are identified, they are (1) 'public sector' 'managerial' and 'professional'; (2) 'manufactural' 'technical'; (3) 'service' 'self-employed' and (4) 'farmer'. Concerning Goldthorpe's (1987) social class scheme (shown in Appendix 9), in which the main distinctions are based on the employment relationship, I renamed the categories 'managers & professionals' 'manual workers' 'service workers & self-employed' and 'farmers'. Information about the new classification is shown in Appendix 10.

As for the city of residence, I classified cities according to the China City Level list released by China Business News (2019), which is a relatively authoritative ranking based on the concentration of commercial resources and urban activity, etc. (shown in Appendix 11).

3.2.5 Data Analysis

(1) Thematic Analysis

Thematic analysis of interview data mainly aims at answering the first and second research questions: (1) whether policy changes parents' parenting ideas; (2) whether policy changes parents' anxiety levels.

All transcriptions were coded on NVivo. The coding strategy was inductive. Coding is important because patterns and themes do not emerge on their own, it depends on the researcher's theoretical frameworks, subjective perspectives, positionality and field understanding (Saldaña, 2021). Therefore, the process of coding should be highly reflexive. As a strategy, I used two rounds of code to involve a process of self-

reflection (ibid., 2021). Descriptions of codes in this analysis are shown in Appendix 12.

(2) Factor Analysis

In the first part of the quantitative analysis, factor analyses are conducted to create factor scores measuring parents' parenting styles. By running Principal Axis Factoring (PAF) on the seven questions under the section 'Parenting Attitude', two factors are recognized after removing the question about 'arranging children's education and life'. The pattern matrix and the descriptions of corresponding factor scores are shown in Table 1. Factor 1 is defined as 'Educational Expectation', where a lower factor score means higher expectation; Factor 2 is defined as 'Intensive Parenting', where a lower factor score means a more intensive parenting method.

Table 1a. PAF Pattern Matrix of Two Factors (with Promax rotation method)

Survey Questions	Factor 1: Educational Expectation	Factor 2: Intensive Parenting
Expecting all-round development	0.954	
Expecting score ranking above average	0.672	
Expecting entering a good university	0.633	
Disagree with natural growth		0.606
Agree with intensive parenting		0.484
Seeking help outside the family		-0.332

Table 1b. Descriptive Statistics of the Factor Scores

Factor Score	N	Median	SD	Min	Max
Factor 1: Educational Expectation					
(lower score: higher expectation)	901	-0.14	1.07	-2.06	3.84
Factor 2: Intensive Parenting					
(lower score: higher engagement in children's life)	901	0.11	1.37	-3.93	3.75

(3) Regression Analysis

The main part of the quantitative analysis aims at answering the third research question: whether the policy impact differs across different SES groups. As discussed in the literature reviews, factors such as ranks, city levels and residential status are found to have an influence on tutoring behaviours or parents' ideology, therefore they (and also grades and school types) will all be treated as control variables in the following models.

The first three models evaluate the policy impact on tutoring participation across SES. As shown in Appendix 13, time spent on three kinds of tutoring all cluster near zero, which causes a very high kurtosis that they cannot pass the assumption check for linear regression. Therefore, I used multinominal logistic regressions instead. I classified the changes in tutoring time into variables which have three categories: ‘reduce tutoring’, where the post-policy level of tutoring hours decreased compared with the pre-policy level; ‘remain unchanged’, where the two levels are the same; and ‘increase tutoring’, where the post-policy level is higher than the pre-policy level. These new variables will be used as the dependent variables. Their descriptive statistics are shown under the ‘Change of Tutoring Participation After Policy’ section in Appendix 8.

The second set of models is to study whether parenting styles differ across SES groups. Factor scores identified in the factor analysis are adopted as the dependent variables, and linear regressions are run between factor scores and SES characteristics. The third set studies whether policy impact on parents’ anxiety differs across SES, two linear regressions are conducted to study whether anxiety levels and the change in anxiety levels differ across SES. Results of assumption check for linear regressions are all exhibited in Appendix 13.

3.2.6 Limitations

I am aware that the snowball sampling method can introduce several research biases. For example, one of the biggest worries is that the sample recruited is not representative of the Guangdong Grade 5-6 population, as the sampling is built through the network of acquaintances in a non-random way (Simkus, 2022). To estimate the biases, the student investigator tried to use the China Education Panel Survey (CEPS) to compare the descriptive statistics of the sample and the target population (all parents of Grade 5-6 students in Guangdong), however, as the CEPS dataset doesn't have primary school data, descriptive statistics of the target population cannot be accessed. This potential bias of non-representativeness should be noted.

During the interviews, most parents are not willing to turn on the videos. I choose the denaturalistic method of transcription, which will remove verbal signals and non-verbal signals that may change the meaning of a conversation (Schegloff, 1997). Although this is a more standardized way, it can lead to the loss of some information reflecting the consideration or emotions of the participants (Oliver, Serovich and Mason, 2005).

As for the questionnaire survey data collection, since data gathering of pre-policy tutoring participation is to ask parents to recall the past, there might be a potential bias that the data about pre-policy participation is not accurate. In the attitudinal factor part, parents reported their ideas or feelings by running the slider to give a score. This way of measuring parents' parenting ideas and anxiety levels might not be fully reliable because parents' subjective measurements will be easily influenced by their mood or attitude toward the policy.

3.3 Researcher Positionality

According to post-positivism, the process of observing the social world involves the researcher's 'interpretive lens', which reflects the researcher's own knowledge and context (Kerdeman, 2015). I am using this section to reflect on my own positionality, as Claud Steele (2010) holds, it is a way to both help myself aware of some unconscious assumptions that I made, and also open this narrative to the readers for public scrutiny.

As a student investigator, my personal education trajectory has passed through both the Chinese and English systems. I received my primary and secondary education in public schools in China, during which I passed the selection tests and enter the provincial key junior middle school and senior high school. In 2017, I attended the *Gaokao*, and scored the top 1% of Guangdong province. My views about Chinese education are from the perspective of a relative overperformer. Of course, it is partly attributed to the additional educational resources that I received. I started participating in English institutional tutoring and mathematics individual tutoring since Grade 5. Now looking back, my incentive for participation was clear. Even if my grades were good, I needed to constantly strengthen my exam skills to surpass more outstanding peers or defend my advantageous position because the educational resources were distributed based on rankings. That kind of comparison was endless. From undergraduate study, I started my education in the UK, which education system is very different. In the UK, the availability of educational resources is linked to an individual's own academic performance more than their ranking among peers. It shifted my motivation from comparison with others to my own needs. Therefore, my experience led me to a pre-assumption that tutoring is highly linked to the degree of competition in the education system, and my analysis of parenting and demand for tutoring may focus more on external factors than purely endogenous motivation.

To avoid biasing the interviews and questionnaire according to my own experiences and beliefs, I tried to avoid value-laden questions and adopted the semi-structural form

of interviews, as well as consulted the interviewees and my supervisor on the design of the questionnaire. During the thematic analysis, I used a second round of coding to include my criticism and reflectivity.

3.4 Ethics

This research is granted the institutional approval by Central University Research Ethics Committee (CUREC) at the University of Oxford. The research procedure strictly adhered to the Ethical Guidelines for Educational Research (British Educational Research Association, 2011) during the research process. For example, in terms of consent, before all interviews and surveys, I required the respondents to read and sign the informed consent form. In terms of anonymity, information that might potentially make the participants identified (e.g., birthday, school name, etc.) was removed from the transcription or survey. In terms of data security, all audio, scanned documents and corresponding transcripts are stored in encrypted USB drives with password protection.

In addition, some research questions about the policy may cause political concern to participants. Therefore, to minimize potential concerns, questions were worded in a way that avoid asking participants to make direct value judgments about the double reduction policy.

Results

4. Qualitative Analysis Findings

4.1 Parenting Styles

From a theoretical perspective, I distinguish parent’s parenting style into two parts: intrinsic parenting idea and extrinsic parenting practice. Parents' intrinsic parenting idea refers to the ideal mode of parenting rooted in their educational concepts, which is usually correlated with parents' social status, perception of educational value and expectations for children. Therefore, parents with different SES usually have different intrinsic parenting ideas. The extrinsic parenting practice is the parenting style that parents finally choose to carry out. Because the external social structure does not always allow parents to practice parenting in line with their ideal way, therefore extrinsic parenting does not necessarily correspond to intrinsic parenting. Extrinsic parenting practices are usually built upon the adjustment of parents’ intrinsic parenting ideas according to their perception of the external environment.

In China, parents from different SES differ in intrinsic parenting ideas. However, due to parents' general high expectations for children's education, under the impact of fierce educational competition, parents with different educational concepts finally show a high degree of convergence in educational practice -- actively intervening in and arranging children's after-school life, as well as seeking additional educational resources for children. Before the double reduction policy, a large number of affordable and accessible subject tutoring provided a 'buffer zone' for parents with different SES to cope with the shock of educational competition. After the implementation of double reduction, the policy alleviates some parents’ perception of external competitive pressure, for whom their educational practices will gradually return to be in accord with their intrinsic parenting beliefs; Meanwhile, the policy has also deepened the perception of the competitive pressure by other parents and will

further intensify their intensive parenting practices. The latter situation is more likely to occur in tier 1 cities.

4.1.1 Intrinsic Parenting: Variance across SES

(1) Lower SES: Natural Growth

According to Lareau (2002), ‘natural growth’, which advocates that children should be given sufficient conditions to grow up while leaving their leisure time for their own activities, is common among parents with lower SES. In the context of Guangdong, this intrinsic notion of ‘natural growth’ is more prevalent among parents with lower education levels and economic deprivation.

The idea of natural growth stems in part from a relatively low intrinsic expectation of children's qualities and abilities. When asked what qualities of children they care about the most, four of the five respondents who are engaged in agricultural and technical work put their children's happiness in the first place, while ‘emotional intelligence, ‘independence’ and ‘interest’ appear more frequently in the higher SES parents’ responses. For example, when talking about how to communicate with children and set goals, mother Q, who works in agriculture, mentioned:

> "Kids today are under a lot of pressure, so I plan not to urge my child to study hard until secondary education. I promised him a happy childhood. "

Mother Q represents a mindset that prioritizes children's happiness over the cultivation of specific abilities. This lower expectation is partly attributed to the social environment of the lower SES. When parents with higher SES compete to sign up their children for activities like golf classes and flute classes, parents with lower SES were preoccupied with the pressure of struggling for life.

T, a Zhaoqing mother who works in agriculture, blamed herself for her daughter's falling grades because she was unable to return home every day after she contracted a farm last year, which was an hour's drive from her home.

> "(Sigh), it's all my fault. I can't have it both ways (take care of her child and make money) ... I did often blame myself that I should have not contracted the farm, but I cannot quit now. It is too late. "

Given the choice over again, Mother T said she would rather cut her family income in half than sacrifice time with her daughter. When faced with a conflict between financial and educational choices, even financially disadvantaged moms don't prioritize making money over children's education. However, at this point, Mother T cannot take care of her daughter every day. For parents with lower SES, natural growth sometimes is the only option bounded by their limited time and resources.

On the other hand, parents with less educational experience lack an understanding of the intrinsic value of education, which can also lead to a low level of educational expectations. L, a music teacher at a private school in Shenzhen, described a group of parents in her class:

> "There are rich local families in Shenzhen who may not have been well educated themselves but have made their fortunes, simply because they were at the forefront of reform and opening up. In their mind, learning is all about a good degree, they don't realize that education has value to children."

In her description, the success of this type of parents is not directly attributed to their own education, so their formation of educational expectations is more inclined to passively accept the indoctrination of external norms. According to Teacher L, this type of parents also tends to have less control over their children, because "they may sleep late and watch TikTok" just like their children.

To conclude, parents with a lower SES incline to natural cultivation because they are preoccupied with other pressures and tend to have less expectation of children's specific ability; parents with a lower educational level, no matter what SES, also tend to prefer the natural cultivation because they value education less.

(2) Higher SES: Concerted Cultivation

'Concerted cultivation' emphasizes that parents develop their children's talents through organizing leisure activities, and its motivation comes from parents' intrinsic expectations of children. Based on my data, parents with higher education levels and better economic conditions more incline to prefer it.

Among nine parents which I classwified as 'middle class' according to their jobs, children's school types and education levels, eight of them participate in at least one interest class. Motivation for their concerted cultivation mainly comes from their perception of educational values and higher expectations.

Father P, a Foshan parent who graduated from Peking University (which ranks top 2 in China), expounded his idea that education can improve children's sense of happiness by developing one's worldview.

> "With a good education, your philosophy will be cultivated, you can have more perspectives when seeing things ... You will gain a kind of happiness, not from some sensory satisfaction, but from a higher level of enjoyment, a kind of spiritual pleasure, which can only be achieved through education. "

Well-educated parents have a higher recognition of the value of education because they experienced the rewards of education themselves. Similarly, parents in better social positions tend to be aware that today's society places more requirements on the

quality of top talents. For example, Lily, a mother in Guangzhou whose child attends an international school, arranges private lessons for her child on weekends, including fencing, Spanish, Cantonese and math. Lily has specific considerations for participation in each activity.

> "The demand for talent in today's society is multifaceted. I let my child participate in fencing to cultivate his cheerful personality through sports, learn Cantonese to inherit our ancestors' culture and learn mathematics to master logical thinking skills ... Media often talks about breaking the social class, but in today's society, getting into a good university is not enough. It's a long process of generational accumulation. For example, society will judge whether a boy is a 'gentleman', whether he exhibits some talents ..."

Lily's discussion of social class mobility brings the inheritance of cultural capital into the realm of family education. It can be said that parents with middle and advanced SES have more comprehensive requirements for their children's abilities and qualities. Therefore, although external competitive pressure may further intensify their educational engagement, these parents innately have a stronger preference for tutoring and are more inclined to actively seek assistance from institutions outside the family.

4.1.2 Extrinsic Parenting: Intensive Parenting with Subject Tutoring

(1) Prevalence of ‘Hidden’ Academic Expectation

Although most parents do not place academic achievement at the top of their educational concerns, they still generally have high expectations for their children's academic performance. When the 16 parents interviewed were asked to rank the importance of children's qualities (happiness, talents, fitness, emotional intelligence, etc.), not a single parent put ‘academic performance’ first, and even 7 parents put it in the bottom three. However, when further asked whether they had requirements for

children's grades, parents would still have an acceptance range in mind regardless of the SES group they belonged to. Shenzhen mother H, a local care worker, whose son is currently enrolled in a private school, prefers the notion of 'natural growth.'

> SI: "Do you have clear expectations for your child's academic performance?"
> Mother H: "I don't think I have a clear expectation. I just hope he can grow up in a good way."
> ...
> SI: "OK, do you have an acceptable range for children's grades?"
> Mother H: "In terms of grades, we usually require him to get more than 95 (out of 100) in each subject. Is that a basic requirement?"
> SI: "How is 95 a grade in the class?"
> Mother H: "95 should be the average. But our attitude is to at least achieve 95 points!"

Part of our conversation reflected that sometimes parents themselves don't realize they have high expectations for their children's performance, but these specific expectations actually exist. Similarly, parents have expectations not only for their children's current grades, but also for their children's future academic qualifications. When C, a Guangzhou father, mentioned the goals he set for his child, he viewed the considerations behind them as the requirements of his social class.

> "I think going to university is a basic threshold, not something to try to achieve. No matter what, for a middle-class family like us, if you can't even go to college, I don't think that's acceptable."

The subject chosen by parent C is 'we' instead of 'I', which means that in his opinion, this attitude is not only the requirement of a single family but the social norms of the imagined community he belonged to. For middle-class families, getting a college degree is no longer a goal that 'should' be done. It's a 'must'.

Essentially, the prevalence of parents' high expectations for their children's academic performance is due to the fact that under the fierce social competition in China, having a high level of education has become a prerequisite for fulfilling other long-term expectations of children. Father L's expectation for his daughter is that she will be able to choose a career she loves and live a happy life. However, he also realizes that without a decent diploma, a person will “lose the right” to choose a job they want. At the same time, competition in the job market in tier 1 cities is more intense than in other cities, so parents in tier 1 cities are more severely impacted by credentialism. Mother H in Shenzhen gave the following examples to demonstrate why she puts high standards on her children's grades:

> "Look at us in Shenzhen, if you want to work in a good unit, you need at least an undergraduate degree, right? ... Your diploma determines your income, and even if you are eligible to stay in Shenzhen.”

As H said, since China's big cities have restrictions on registering for their local residence, obtaining a degree from a key university will help immigrants settle down there. The conflict between the scarcity of good educational resources and the general high expectations of parents for their children's academic achievement is bound to intensify the competitive atmosphere. According to rational choice theory, under the restriction of social structure, people will weigh their own preferences, costs and benefits of potential decisions, and make choices which returns outweigh costs (Giddens, 2010). In the context of Chinese parenting practices, when the fierce educational competition makes the parents' intrinsic parenting ideas no longer the optimal solution to realize their educational expectations (e.g., live happily in the future), then the parents' own personal aspirations will give way to the exam-oriented strategies.

(2) Subject Tutoring: ‘Buffer Zone’ for Shock from Competition

Before the double reduction, shadow education acted as a ‘buffer zone’ for parents to cope with the shock from educational competition. Therefore, the extrinsic parentings of different SES converged -- intensive parenting centred on shadow education. As mentioned above, according to our sample data, the pre-policy participation rate of shadow education has exceeded 60%. Why has subject tutoring become a common path for parents to practice intensive education? This research attributes parents' reliance on subject tutoring to three characteristics of institutional tutoring: high availability, high quality and peer effect.

Mr. W, a former executive of one of China's top three subject tutoring institutions, explained how they reached such a wide range of customers:

> “We launched a wide range of products, from high-end private tutoring to public online courses, to meet the needs of all customer segments. Time arrangement is flexible; parents can choose any time slot they prefer. Price also varies, if the class is 100 yuan per hour in Beijing, then it is about 70 yuan in Chengdu. In the sinking market like small towns, the price can be even cheaper.”

Before the policy, there are both high-priced and low-priced courses; There are off-line classes with fixed hours and large online classes that can be reviewed repeatedly. Therefore, subject tutoring is a relatively accessible choice for parents from almost all backgrounds.

Meanwhile, most parents interviewed spoke positively about the quality of institutional tutoring, and some reported that their children preferred institutional tutoring to the school curriculum. According to Father Y, Executive W and Tutor O, reasons are as follows, the content and format of institutional tutoring focused more on children's interaction and experience, because institutions had more room for

innovation than schooling; Compared with schoolteachers, institution teachers only need to pay attention to teaching, so they invested more time in course design; A high salary also allowed institutions to recruit more competent teachers.

The prevalent participation in shadow education has created peer pressure to prompt parents with different SES to join. Father N, who worked as a freight driver in Shenzhen, spent nearly 40% of his family income last year to support his child to participate in the best local tutoring. Recalling his considerations, he said that all parents around him had signed up for tutoring at that time. If he did not sign up for his child, he might fall behind. Therefore, even though the burden was heavy, he still persisted in:

> "As long as he (child) insists, even if I need to sell a house or a car, I will support him to study. I believe he can help me earn it back in the future. If he fell behind because I do not let him participate in tutoring, I will definitely regret it for the rest of my life."

Due to its high availability, high quality and peer effect, attending tutoring has become a rational choice to deal with the pressure of competition. Therefore, before the double reduction policy, no matter what kind of intrinsic ideas parents hold, most of them will conduct intensive parenting centred on subject tutoring. Tutoring, as a ‘buffer zone’, blurred the differences in parenting practices across parents with different characteristics before the double reduction.

4.1.3 Policy Impact on Parenting Styles

After the double reduction policy, most subject tutoring institutions have been suspended since September 2021. At the same time, other supporting policies, such as reducing homework burdens, equalizing secondary schools, and banning score rankings, also intended to create a more relaxed and less competitive educational

environment. This study shows that the policy impact on parents' perception of educational competition varies across parents' SES, and in general, this difference is most significant between tier 1 cities and the others.

(1) Outside Tier 1 Cities: Return to Intrinsic Parenting Ideas

All 7 parents interviewed from outside tier 1 cities reported that the policy has eased their perceived pressure on education competition. Ideas against the competition are more widely accepted in smaller cities and towns. When asked about the understanding of the policy, Mother G, who lives in a county Dinghu, said that after the double reduction, schools and teachers often persuade parents that intensive learning ways are no longer advocated by the country.

> "What teachers meant is that we need not to study after school. And people are lazy, if everyone relaxes, the serious study attitude will not be there anymore."

The willingness of parents to accept the idea against competition is not for granted. Mother G attributed it to the local policies which reduce substantial competitive pressures.

> "Since last year, schools don't rank students, they don't publish their results ... Entry to secondary schools is based on lottery admission ... Now students have nothing to compare themselves with. "

Similarly, grade 5 teacher E in Jieyang, and two parents in Zhaoqing, reported that junior high school selection tests have been completely banned in their city. As their perception from external competition has been largely improved, intensive parenting centered on subject tutoring is no longer the optimal solution that parents must adopt.

Reducing perceived pressure enables parents with different SES to follow their intrinsic beliefs of ideal parenting ways. When asked about observations after the double reduction, D, a grade 6 Chinese teacher in a public primary school in Zhaoqing, said that although the difference was not very significant in the short term, there were differences in parents' responses to the change.

> "In the past, when institutional tutoring existed, maybe 80% of the class would attend. However, after the double reduction, different parents have a different understanding of the policy, which are split into two halves. Some parents see further future, they know that even if the homework is reduced, meritocracy remains, and they will still let their children participate in subject tutoring and interest classes. Other parents think that double reduction reduces the study burden and encourages them to let children grow up happily, therefore they may quit even the interest classes they previously attended. "

Similar patterns are also observed in my samples. At least four parents in my sample reported that they quit tutoring and did not seek any replacement, three of them are classified into 'natural growth' group according to their interviews. For example, Mother G, who has a technical school education background, lives in Dinghu county. Before September 2021, she signed up for her son's Chinese and English tutoring and basketball classes; after the policy, her son does not participate in any other activities except for the basketball class. Compared with last year, her parenting style now is more inclined to her 'natural growth' ideas she believes in:

> "A child's academic performance is determined by his own learning attitude and intelligence. It is useless for parents to force him to attend more courses, which will only deepen the conflict between parents and children."

In comparison, Huizhou Father J is a director of a media company with a bachelor's

degree, who is classified by me as a ‘concerted cultivation’ advocator. J said the policy will not affect the way of his parental education. Before the double reduction, he signed up for his daughter's Chinese reading classes, dance classes and chess classes; After the double reduction, his daughter's Chinese reading class is cancelled, then he arranges computer programming as a replacement.

> "I let her learn more things, cultivate her curiosity and learning habits... with some talents, she will be more confident in class. "

For parents with lower SES like mother G, their parenting styles gradually incline to the ‘natural growth’; for parents who have high expectations for their children and better perception of education values, like father J, they will still have a demand for educational resources outside school and sign up for interest class as a replacement.

(2) Tier 1 Cities: Intensify the Parenting Styles

In tier 1 cities, there is still a considerable legacy of education competition because the education system is larger and relatively difficult to manage. Meanwhile, parents in tier 1 cities generally have higher expectations for their children. After the double reduction, the academic competition and the subject tutoring market are still surging under the surface, which exacerbates the level of competitive pressure perceived by some parents. As a result, parents in tier 1 cities may further strengthen the intensity of intensive education.

First of all, the resources of extracurricular education are more concentrated in tier 1 cities. After the policy, a large number of teachers previously working in institutions transform into private tutoring. A former tutoring institution executive Mr. W said that according to the internal statistics of his company, nearly 70% are still staying in the education industry, and most of these teachers live in tier 1 or tier 2 cities. At the same time, the company is also consciously diverting the original customer base to their

other products:

> "After the double reduction, because parents appreciate these (tutoring) teachers, parents are willing to continue to follow the teachers out of trust ... A math teacher can teach programming. An English teacher can switch to TOFEL classes. "

The transformation of subject tutors has created a large number of private subject tutoring and newly opened interest classes, which also meet the needs of 'concerted cultivation' parents in tier 1 cities.

Meanwhile, three parents reported that some junior high school admission was still linked to their children's ability in their cities (i.e., Guangzhou and Shenzhen), despite the apparent ban on selection tests. Guangzhou father C reported that some top secondary schools secretly admit high-quality students through the form of '*Mikao*' (i.e., secret tests).

> Parent C: "Secondary schools in Guangzhou are said to admit students by lottery, but in fact, there are many secret tests for early admissions. Schools are divided into several echelons, such as XXX (school names), the so-called first echelon, they will select candidates from various *Mikao* (secret tests). If you don't get selected, you enter the lottery."
> SI: "What is a 'secret test'?"
> Parent C: "For example, some competitions like Mathematical Olympiad, and Huashu Cup. There's a programming course for kids, which looks like an information technology training class, but the school actually selects students from these institutions (of interest classes)."

Parent Y in Shenzhen also reported that some good private schools would select students through internal examinations, and some exam questions for the test would

be spread in advance through WeChat group chats organized by some institutions. As external competition is still perceived to be happening, individual subject tutoring becomes a widely accepted substitute for institutional subject tutoring. Three parents who did not participate in individual tutoring before the double reduction: M, who runs a small supermarket in Dongguan; J, a freight driver in Shenzhen and Y, a civil servant in Shenzhen, now all are considering or choosing to sign up for individual tutoring for their children.

The external competitive environment in tier 1 cities has not been perceived to improve, neither has parents' internal beliefs of competition. One explanation is that parents with better SES have a longer prospect for children's future. *Gaokao* is still almost the only access to academic university, therefore the meritocracy value would not be changed by the policy. Dongguan mother M reflected that her exam-oriented education practice will not change as long as children's merits are still measured by exam scores. Parents' scepticism about the policy has also spread to schools. X is an English teacher in a private school in Shenzhen. She argues that the better the school, the less likely it is to be taken lightly.

> "Some migrant schools relax after the double reduction, but our school will not relax. They go to school at 8 am now, but we still require our students to come to school at 7:10 am. The better the school, the more cautious their response to the policy. "

After the double reduction, many parents in tier 1 cities did not reduce their perception of competitive pressure. Instead, the competition for educational resources moved from the surface (institutional tutoring and selection examinations) to under-the-cover (private tutoring and secret examinations), which intensified parents' perception of pressure. At the same time, the transformation of tutors in subject institutional tutoring has created new supplies of individual tutoring or interest classes. Therefore, regardless of the SES parents belong to, most of the interviewed

parents in tier 1 cities indicated that they would continue the intensive education practice centred on private tutoring. The double reduction policy will not significantly amplify differences in parenting styles across parents' SES.

4.2 Anxiety Levels

The two 'reductions' of the policy: reduction of shadow education and reduction of homework burden, respectively, reduce the engagement of tutoring institutions and schools in children's education. As a result, the responsibility for after-school education will return to parents more than ever. This study shows that the deepening of some parents' educational anxiety after the double reduction policy mainly comes from (1) insufficient preparation in parental education; (2) uncertainty about the external competition; (3) lower cost performance of subject tutoring.

4.2.1 Preparedness in Parental Education

Before the double reduction policy, Dinghu mother G used to send her son to a tutoring institution on Saturdays. After the double reduction, her son usually stays at home for his entertainment on Saturdays. Mother G said that she believed a child’s academic performance is more related to one’s own attitude and savvy, that is why when her son's learning attitude is worsening this year, mother G gets anxious.

> "Children like to listen to their teachers, not their parents. I am very upset. I tried to communicate with the teacher, also talked with him (her son), but he is still indifferent to his study ... In the past, there was a learning atmosphere in cram schools, where you had to learn even if you didn't want to."

Before the double reduction, mother G regarded cram school as a place where the problems of children’s loose attitude can be solved. However, after the policy, mother G is unable to take up this job herself. During the interview, mother G asked the

student researcher for advice on how to communicate with her son and correct his learning attitude, which shows that mother G is already “at her wit's end” about the parental education problem and is anxious about it. A similar situation also happens to father A, a porter in Qingyuan. He reported that his son spends more time on playing mobile games after the amount of homework is reduced, and they often clash over it. In line with Lareau’s framework (2002), parents who lack good education background often lack the proper vocabularies to communicate with children when they encounter problems in parental education, so they are more likely to feel anxious.

In comparison, some parents with clear ideas of parental education are satisfied with their children’s having more time in the family. After the double reduction, father P in Foshan City, who graduated from Peking University with a bachelor's degree, has more time to accompany his daughter. They usually watch documentaries, read books and do outdoor sports together. During the interviews, compared with other parents, he clearly shows a better preparation and is more confident that he will play a good role of ‘father’. Similar patterns are also shown in the other 5 parents with a college degree, even though some of them are busy and do not have enough time to accompany their children, they are generally clearer in describing what is their ideal way to communicate with children.

4.2.2 Uncertainty about Competition

As mentioned earlier, in tier 1 cities, parents' perception of educational competition has generally not eased. The competition for educational resources has changed from the surface (e.g., institutional tutoring and selection examinations) to under-the-cover (e.g., private tutoring and secret tests). Uncertainty about the competition is fueling parents' peer pressure and increasing their anxiety levels. This is especially prominent for parents in tier 1 cities whose family status is higher and who are more likely to be exposed to hidden competition.

After the double reduction, private tutoring has become the main form of subject tutoring, and information about private teaching resources cannot be publicly announced in society but spread through social networks. This makes the acquisition of tutoring resources not only put forward requirements on the family's economic capital, but also the social capital of the parents. Parent C in Guangzhou described how access to tutoring resources is spread through '*Quanceng* (i.e., cliques)'.

> "Now there are many group chats (on WeChat) publishing educational information, which form '*Quanceng*'. They are mainly organized by some former institutions' staff. In daily communication, parents will share them with each other, and some of them you have to pay a membership fee to get into ... You can find information about secret tests, tutoring resources, and even sample questions for secret tests."

Recommended by parent C, the student investigator browsed three public subscription accounts (i.e., the media functions of WeChat) which share QR codes of 'cliques'. It has been observed that these accounts do disclose some inside information in disguised ways (such as intentional spelling errors). For example, these accounts claim that award-winners of science and technology competitions will be selected for admission to prestigious junior high schools. Some screenshots of them are attached in Appendix 14. The competition between educational resources is hidden under the surface, causing parent C to become more anxious than before. When C was asked about the possible characteristics of parents in their 'cliques', she supposed that most members are in a similar (relatively good) SES as her, otherwise, information about the 'clique' would not even reach them through social networks. After the double reduction, parents exposed to this 'hidden competition' are more likely to have a higher anxiety level.

4.2.3 Decrease of Tutoring's Cost Performance

For parents who insist on intensive parenting centred on subject tutoring, after the suspension of institutional tutoring, demand for individual tutoring will to some extent become inelastic (Choi & Choi, 2016). The rising cost of individual tutoring and the dissatisfaction with the quality of individual tutoring has increased the anxiety of parents who still highly rely on shadow education.

After the double reduction policy, the demand for individual subject tutoring in tier 1 cities has increased rapidly, and the individual tutoring industry has changed from a buyer's market to a seller's market. This shift results in rising prices and the need for parents to accommodate teachers in turn. M, a mother in Dongguan, said her monthly educational expenditures have nearly tripled because of the shift from institutional tutoring to individual tutoring. Father C in Guangzhou said that in the local private tutoring market, the bargaining power of parents largely decreased due to asymmetric information. Mother B in Shenzhen also reported that for her child's individual tutoring, in the past it was time flexible, but now they have to accommodate tutors' schedules in turn.

At the same time, many parents who have switched from institutional to individual tutoring express dissatisfaction with the quality of individual tutoring. Mother M reported that her child felt that private tutoring was "boring" and "poorly taught" compared with institutional tutoring that they attended in the past. K, a mother in Guangzhou whose child tried two individual tutoring sessions after the policy, stopped participating in any tutoring now because Mother K is unsatisfied with the tutor's performance.

After the double reduction, for these parents who still insist on attending subject tutoring, the significant decrease in cost performance of individual tutoring makes them dissatisfied, and the lack of access to high-quality subject tutoring at low cost has also contributed to their anxiety.

5. Quantitative Analysis Findings

5.1 Change in Tutoring Participation across SES

To study the change in children's participation in three types of tutoring, multinomial logistic regressions were performed to model the relationship between the predictors and the direction of change. The traditional 95% confidence level was adopted. In all three models, the pre-policy participation for each corresponding type of tutoring is controlled by setting 'participated before Sept 2021' as dummy variables. Full model results are exhibited in the appendix 15.

Table 2. (Partial) Results for Model 1: Change in Institutional Subject Tutoring (N=1009)

Predictor's Unique Contributions in the model

Predictor	**X^2**	**df**	**P**
City Tier	1.68	4	0.79
Pre-policy Participation in Institutional Subject Tutoring	445.00	2	<0.001 ***
Parent's Education Attainment	10.26	6	0.04 *
Parent's Occupation	2.37	4	0.88
Residential Status	2.28	2	0.32
Grade Ranks	1.09	4	0.90

Parameter Estimates Contrasting 'No Change' versus Each of the Other Groups (partial)

Predictor	**"No Change" vs.**	**B**	**OR**	**P**
Intercept	Increase	-3.87		***
	Decrease	-21.29		***
Parent's Educational Attainment (Reference Group = Tertiary)				
Less than Primary	Increase	1.03	2.79	*
	Decrease	-1.38	0.25	
Secondary	Increase	0.25	1.28	
	Decrease	-0.30	0.74	
Parent's Occupation (Reference Group = Farmers)				
Managers & Professionals	Increase	0.61	1.84	
	Decrease	0.07	1.08	
Manual Workers	Increase	-0.03	0.97	
	Decrease	-0.40	0.67	
Service Workers & Self-employed	Increase	0.39	1.47	
	Decrease	-0.19	0.83	

Note: Model fitting information $X^2 = 483.16$, Nagelkerke R^2 =0.589, p < 0.001 ***. *p < .05 ** p<0.01 *** p<0.001.

Table 2 shows the partial results of regression on change in institutional subject tutoring. The reference group was those parents whose children did not change the amount of time attending institutional subject tutoring. Addition of the predictors to an empty model significantly improved the fit between model and data that at least one of the regression coefficients in the model is not equal to zero, χ^2 (20, N = 1009) = 483.16, $p < 0.001$. Besides the control variable of pre-policy participation, significant unique contributions were made by predictor of parent's educational attainment χ^2 (6, N = 1009) = 10.26, $p = 0.04$. According to the parameter estimates, there is no significant parameter for all predictors when comparing the 'no change' group with parents who reduce their children's participation in institutional tutoring, while only one of the predictors has significant parameter estimates for comparing 'no change' group with parents who increase children's institutional tutoring participation. Compared to 'no change', parents with an education background less than primary school compared to parents with tertiary education were more likely to increase their participation in institutional subject tutoring, Odds Ratio (OR) = 2.79, $p = 0.013$. The size of the subgroup of 'increase & Less than primary' is 19, larger than the conventional criterion of 15, therefore is large enough to be drawn the conclusion.

Table 3. (Partial) Results for Model 2: Change in Individual Subject Tutoring (N=1009)

Predictor's Unique Contributions in the model

Predictor	**X^2**	**df**	**P**
City Tier	3.06	4	0.55
Pre-policy Participation in Individual Subject Tutoring	314.90	2	<0.001 ***
Parent's Education Attainment	5.96	6	0.20
Parent's Occupation	4.03	4	0.67
Residential Status	1.46	2	0.48
Grade Ranks	0.73	4	0.95

Parameter Estimates Contrasting 'No Change' versus Each of the Other Groups

Predictor	**"No Change" vs.**	**B**	**OR**	**P**
Intercept	Increase	-3.05		***
	Decrease	-21.84		***
Parent's Educational Attainment (Reference Group = Tertiary)				
Less than Primary	Increase	-0.13	0.88	
	Decrease	0.62	1.87	
Secondary	Increase	-0.57	0.56	
	Decrease	-1.51	0.22	
Parent's Occupation (Reference Group = Farmers)				
Managers & Professionals	Increase	-0.40	0.67	
	Decrease	-1.88	0.15	
Manual Workers	Increase	0.18	1.20	
	Decrease	-0.65	0.52	
Service Workers & Self-employed	Increase	-0.44	0.65	
	Decrease	-0.88	0.42	

Note: Model fitting information $X^2 = 336.67$, Nagelkerke R^2 = 0.563, p < 0.001 ***. *p < .05 ** p<0.01 *** p<0.001.

Table 3 presents the partial results of relationships between predictors and changes in individual subject tutoring. The reference group was those parents whose children did not change the amount of time attending private subject tutoring. Addition of the predictors significantly improve the fit of model, χ^2 (20, N = 1009) =336.67, p <0.001. However, none of the predictors besides pre-policy participation provides a statistically significant parameter estimate, therefore we cannot conclude that there is heterogeneity in the short-term change of individual subject tutoring across parents' SES features.

Table 4. (Partial) Results for Model 3: Change in Interest Class (N=1009)

Predictor's Unique Contributions in the model

Predictor	**X^2**	**df**	**P**
City Tier	5.08	4	0.28
Pre-policy Participation in Interest Class	433.13	2	<0.001 ***
Parent's Education Attainment	5.79	6	0.60
Parent's Occupation	4.55	4	0.22
Residential Status	2.21	2	0.33
Grade Ranks	3.52	4	0.48

Parameter Estimates Contrasting 'No Change' versus Each of the Other Groups

Predictor	**"No Change" vs.**	**B**	**OR**	**P**
City Tier (Reference Group = tier 3)				
Tier 1	Increase	0.23	1.26	
	Decrease	-0.25	0.78	
Tier 2	Increase	0.88	2.41	*
	Decrease	0.28	1.33	
Parent's Educational Attainment (Reference Group = Tertiary)				
Less than Primary	Increase	-0.56	0.57	
	Decrease	0.94	2.55	
Secondary	Increase	-0.48	0.62	
	Decrease	-0.38	0.69	
Parent's Occupation (Reference Group = Farmers)				
Managers & Professionals	Increase	0.27	1.31	
	Decrease	0.62	1.86	
Manual Workers	Increase	0.12	1.13	
	Decrease	0.75	2.12	
Service Workers & Self-employed	Increase	-0.02	0.98	
	Decrease	0.89	2.44	

Note: Model fitting information $X^2 = 546.532$, Nagelkerke R^2 =0.537, p < 0.001 ***. *p < .05 ** p<0.01 *** p<0.001.

Table 4 presents the partial results of relationships between predictors and changes in interest class. The reference group was those parents whose children did not change the amount of time attending the interest class. Besides pre-policy participation variables, one predictor shows a statistically significant parameter when comparing the 'no change' group with parents who increase their children's participation in interest class. The expected odds of increasing participation in interest classes than 'no change' is higher in tier 2 cities compared with tier 3 cities, OR = 2.41, p = 0.048. However, it is worth notice that tier 2 city's respondents only constitute

3.6% of the sample data (Frequency = 45), therefore the finding might be biased as the statistical power could potentially be small.

5.2 Parenting Ideas across SES and Cities

As it will be very likely to be inaccurate to measure parent's pre-policy parenting ideas by asking them to recall their ideas in the past, I will instead measure whether there are differences in parenting ideas between SES now, to crosscheck whether the assumption for the qualitative findings of policy impact on SES is valid. Linear regressions are conducted to investigate the relationship between predictors and two factor scores, defined as 'expectation on children' and 'intensive parenting', respectively. For each score, three models are constructed sequentially, model 1 only includes the dependent variables of SES and city level, model 2 includes the interaction term between SES predictors and city level to study the heterogenous effect across cities, and model 3 takes other characteristics of parents and children into control.

Table 5. Results for Model 4: Hierarchical Regression Analyses for Educational Expectation Scores

	Model 1 (N=645)				**Model 2** (N=640)				**Model 3** (N=634)			
	B	s.e.	β	p	B	s.e.	β	p	B	s.e.	β	p
Intercept	0.17	0.13			0.21	0.14			-0.09	0.16		
City Tier (Reference Group = Outsides Tier 1)												
Tier 1	0.07	0.11	0.02		-0.41	0.46	-0.15		-0.40	0.45	-0.14	
Parent's Educational Attainment (Reference Group = Less than Primary)												
Secondary	-0.08	0.12	-0.04		-0.10	0.13	-0.05		-0.07	0.12	-0.03	
Tertiary	-0.51	0.14	-0.22	***	-0.52	0.16	-0.22	**	-0.38	0.16	-0.16	*
Parent's Occupation (Reference Group = Managers & Professionals)												
Manual Workers	-0.13	0.11	-0.05		-0.20	0.12	-0.08		-0.24	0.12	-0.09	*
Service Workers & Self-employed	-0.24	0.13	-0.08		-0.26	0.13	-0.09	*	-0.30	0.13	-0.10	*
Farmers	0.15	0.12	0.05		0.11	0.13	0.04		-0.02	0.13	-0.01	
Interaction Terms												
Tier 1 * Secondary					0.13	0.45	0.03		0.01	0.43	0.00	
Tier 1 * Tertiary					0.16	0.46	0.04		0.07	0.45	0.02	
Tier 1 * Manual Workers					0.64	0.33	0.11		0.54	0.34	0.09	
Tier 1 * Service Workers & Self-employed					0.37	0.26	0.10		0.31	0.25	0.08	
Tier 1 * Farmers					0.66	0.57	0.06		0.74	0.56	0.06	
Other Characteristics												
Grade (0=Grade 5, 1=Grade 6)									-0.10	0.08	-0.05	

School Type (Reference Group = Public)												
Private (Chinese)									-0.04	0.20	-0.01	
Private (Bilingual)									-0.04	0.20	-0.01	
Residential Status (Reference Group = Non-Local)												
Local									-0.05	0.10	-0.02	
Grade Ranks (Reference Group = High)												
Middle									0.48	0.09	0.23	***
Low									0.87	0.14	0.26	***
ΔR^2				0.007	$F_{(5,640)} = 0.966$				0.066	$F_{(6,634)} = 7.978$		***
R^2	0.048	$F_{(6,645)} = 5.401$	***	0.055	$F_{(11,640)} = 3.385$	***			0.121	$F_{(17,634)} = 5.149$		***

*p < .05 ** p<0.01 *** p<0.001.

Scores for ‘Educational Expectation’ are on a scale that a lower score represents a higher expectation for children. According to the Table 5, addition of interaction terms between SES and city did not significantly explain more variance of the education expectation scores ($\Delta R^2 = 0.007, \mathrm{F}_{(5,640)} = 0.966,\ p = 0.438$), while addition of more control characteristics did ($0.066\ \mathrm{F}_{(6,634)} = 7.978, p < 0.001$). It fits the assumption that indeed different SES parents have different levels of educational expectation, regardless of the cities they live in. According to coefficient estimates in the ‘contextualized’ model 3, among all SES variables of interest, parent’s educational attainment and occupation both have a significant association with parent’s educational expectation. Parents with tertiary education are predicted to have a higher expectation for children than parents with less than primary school education, B = -0.38, p = 0.018. Compared with parents as managers and professionals, parents who were manual workers have a lower ‘Educational Expectation’ score, B = -0.24, $p =$ 0.018; parents who were service workers and self-employed also scored lower, B = -0.30, $p =$ 0.045. In other words, with all other predictors fixed, compared with parents having less than primary education and working as managers or professionals, having a tertiary education background, working as manual, service workers or self-employed predicts a higher expectation on children.

Table 6. Results for Model 5: Hierarchical Regression Analyses for Intensive Parenting Scores

	Model 1 (N=645)				**Model 2** (N=640)				**Model 3** (N=634)			
	B	s.e.	β	p	B	s.e.	β	p	B	s.e.	β	p
Intercept	0.13	0.17			0.09	0.18			0.31	0.22		
City Tier (Reference Group = Outside Tier 1)												
Tier 1	0.12	0.14	0.03		0.13	0.60	0.04		-0.05	0.61	-0.01	
Parent's Educational Attainment (Reference Group = Less than Primary)												
Secondary	-0.17	0.16	-0.06		-0.18	0.17	-0.07		-0.17	0.17	-0.06	
Tertiary	-0.19	0.19	-0.06		-0.10	0.21	-0.03		-0.06	0.21	-0.02	
Parent's Occupation (Reference Group = Managers & Professionals)												
Manual Workers	-0.08	0.14	-0.02		-0.04	0.16	-0.01		-0.06	0.16	-0.02	
Service Workers & Self-employed	0.12	0.16	0.03		0.14	0.17	0.04		0.16	0.17	0.04	
Farmers	0.09	0.16	0.03		0.13	0.17	0.04		0.14	0.17	0.04	
Interaction Terms												
Tier 1 * Secondary					0.04	0.58	0.01		0.01	0.58	0.00	
Tier 1 * Tertiary					-0.32	0.60	-0.06		-0.21	0.60	-0.04	
Tier 1 * Manual Workers					-0.03	0.44	0.00		0.20	0.45	0.03	
Tier 1 * Service Workers & Self-employed					0.25	0.34	0.05		0.32	0.34	0.07	
Tier 1 * Farmers					-0.09	0.74	-0.01		0.12	0.75	0.01	
Other Characteristics												
Grade (0=Grade 5, 1=Grade 6)									-0.17	0.11	-0.07	

School Type (Reference Group = Public)					
Private (Chinese)			-0.48	0.27	-0.08
Private (Bilingual)			0.32	0.27	0.05
Residential Status (Reference Group = Non-Local)					
Local			-0.06	0.13	-0.02
Grade Ranks (Reference Group = High)					
Middle			-0.18	0.12	-0.07
Low			0.21	0.19	0.05
ΔR^2		0.004 $F_{(5,640)} = 0.495$	0.021 $F_{(6,634)} = 2.274$		*
R^2	0.006 $F_{(6,645)} = 0.629$	0.010 $F_{(11,640)} = 0.567$	0.031 $F_{(17,634)} = 1.174$		

*p < .05 ** p<0.01 *** p<0.001.

Scores for ‘Intensive Parenting’ are on a scale that a lower score represents higher participation in children’s education. As shown in Table 6, according to the ANOVA test, none of the three models explains a significant proportion of the variance (Model 1: $F_{(6,645)} = 0.629,\ p = 0.707$; Model 2: $F_{(6,645)} = 0.629, p = 0.856$; Model 3: $F_{(17,634)} = 1.174,\ p = 0.281$). Therefore, according to my sample data, neither SES nor city level predicts a significant difference in intensive parenting scores. It fits the assumption that intensive parenting as extrinsic parenting practices are common among most parents, regardless of their SES characteristics or cities they live in.

5.3 Parent’s Anxiety across SES and Cities

Models 6 and 7 study the relationship between predictors, anxiety level and change in anxiety after policy. Sequential methods are adopted within each Models, model 1 only includes the dependent variables of SES and city level, model 2 include the interaction term between SES predictors and city level to study the heterogenous effect across cities, and model 3 control other characteristics to contextualize the model.

Table 7. Results for Model 6: Hierarchical Regression Analyses for Anxiety Level Scores

	Model 1 (N=830)				**Model 2** (N=640)				**Model 3** (N=634)			
	B	s.e.	*β*	p	B	s.e.	*β*	p	B	s.e.	*β*	p
Intercept	1.92	0.12			1.87	0.13			1.56	0.15		
City Tier (Reference Group = Outside Tier 1)												
Tier 1	0.17	0.10	0.06		0.49	0.43	0.18		0.54	0.42	0.20	
Parent's Educational Attainment (Reference Group = Less than Primary)												
Secondary	-0.08	0.11	-0.04		-0.06	0.18	-0.03		-0.06	0.12	-0.03	
Tertiary	-0.17	0.13	-0.07		-0.08	0.14	-0.04		0.03	0.14	0.02	
Parent's Occupation (Reference Group = Managers & Professionals)												
Manual Workers	0.10	0.10	0.04		0.12	0.12	0.04		0.04	0.11	0.2	
Service Workers & Self-employed	0.05	0.12	0.02		0.05	0.12	0.02		-0.01	0.12	-0.003	
Farmers	0.20	0.12	0.07		0.25	0.12	0.09	*	0.10	0.12	0.04	
Interaction Terms												
Tier 1 * Secondary					-0.36	0.41	-0.09		-0.42	0.40	-0.11	
Tier 1 * Tertiary					-0.55	0.43	-0.15		-0.63	0.42	-0.17	
Tier 1 * Manual Workers					0.12	0.29	0.02		0.03	0.29	001	
Tier 1 * Service Workers & Self-employed					0.23	0.22	0.06		0.12	0.22	0.03	
Tier 1 * Farmers					-0.44	0.49	-0.04		-0.42	0.48	-0.04	
Other Characteristics												
Grade (0=Grade 5, 1=Grade 6)									-0.05	0.07	-0.02	
School Type (Reference Group = Public)												

Private (Chinese)							-0.06	0.17	-0.01	
Private (Bilingual)							-0.12	0.18	-0.02	
Residential Status (Reference Group = Non-Local)										
Local							-0.02	0.09	-0.01	
Grade Ranks (Reference Group = High)										
Middle							0.48	0.08	0.22	***
Low							0.93	0.13	0.27	***
ΔR^2				$0.005\ F_{(5,825)} = 0.888$			$0.066\ F_{(6,819)} = 9.841$			***
R^2	$0.012\ F_{(6,830)} = 1.728$		***	$0.018\ F_{(11,640)} = 1.346$		***	$0.084\ F_{(17,634)} = 4.400$			***

Model 6 (results shown in Table 7) predicts the parents' anxiety score by SES predictors, city level and other characteristics. Parents' anxiety scores are measured as a continuous variable (by running sliders) in a range from 0 to 4, where 0 represents not anxious at all, and 4 represents the highest level of anxiety. According to model 2, compared with Managers & Professionals, parents who are farmers are more likely to be anxious about children's education, resulting in a 0.25 ($p = 0.040$) increase in anxiety scores. Besides this, no other SES predictor or city level is found to have a significant effect on parents' anxiety. However, it is interesting to mention that in model 3, children's academic performance reflected by 'Grade ranks' is significant in predicting parent's anxiety, which compared with those whose children are in the high ranks, those parents whose children's grade ranks are in the middle or low ranks have a 0.48 ($p < 0.001$) and 0.93 ($p < 0.001$) higher score. When children's academic performance and other characteristics are controlled, the 'Farmers' group is no longer more anxious than 'Managers & Professionals'. One possible explanation for the greater anxiety felt by farmers is the relatively lower grade ranks of their children.

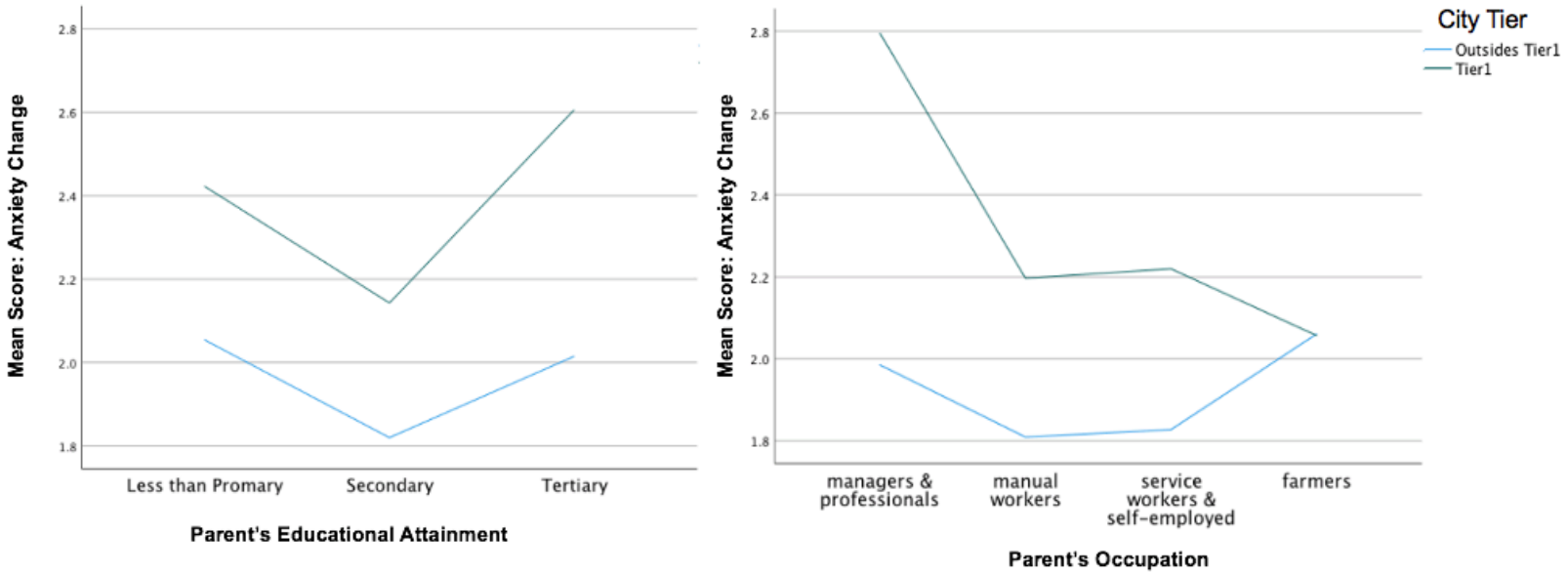
Table 8. Results for Model 7: Hierarchical Regression Analyses for Anxiety Change Scores

	Model 1 (N=741)				**Model 2** (N=736)				**Model 3** (N=730)			
	B	s.e.	*β*	p	B	s.e.	*β*	p	B	s.e.	*β*	p
Intercept	1.99	0.16			1.97	0.17			1.97	0.20		
City Tier (Reference Group = Outside Tier 1)												
Tier 1	0.46	0.12	0.14	***	0.86	0.52	0.27		0.83	0.53	0.26	
Parent's Educational Attainment (Reference Group = Less than Primary)												
Secondary	-0.20	0.15	-0.08		-0.18	0.16	-0.07		-0.16	0.16	-0.06	
Tertiary	0.07	0.17	0.03		0.04	0.19	0.02		0.03	0.19	0.01	
Parent's Occupation (Reference Group = Managers & Professionals)												
Manual Workers	-0.06	0.13	-0.02		-0.03	0.15	-0.01		-0.05	0.15	-0.02	
Service Workers & Self-employed	-0.06	0.16	-0.02		-0.03	0.16	-0.01		-0.05	0.16	-0.01	
Farmers	0.17	0.15	0.05		0.20	0.16	0.06		0.20	0.16	0.06	
Interaction Terms												
Tier 1 * Secondary					-0.09	0.50	-0.02		-0.09	0.50	-0.02	
Tier 1 * Tertiary					-0.04	0.52	-0.01		-0.10	0.52	-0.02	
Tier 1 * Manual Workers					-0.43	0.35	-0.07		-0.40	0.36	-0.06	
Tier 1 * Service Workers & Self-employed					-0.46	0.27	-0.10		-0.51	0.27	-0.11	
Tier 1 * Farmers					-0.83	0.59	-0.06		-0.65	0.60	-0.05	
Other Characteristics												
Grade (0=Grade 5, 1=Grade 6)									-0.17	0.10	-0.07	
School Type (Reference Group = Public)												
Private (Chinese)									0.22	0.22	0.04	

Private (Bilingual)							0.22		0.24	0.04	
Residential Status (Reference Group = Non-Local)											
Local							0.11		0.12	0.04	
Grade Ranks (Reference Group = High)											
Middle							-0.01		0.11	-0.004	
Low							0.10		0.18	0.02	
ΔR^2				0.006 $F_{(5,736)} = 0.974$			0.008 $F_{(6,730)} = 1.034$				
R^2	0.034 $F_{(6,741)} = 4.320$		***	0.040 $F_{(11,736)} = 2.799$		***	0.048 $F_{(17,730)} = 2.180$				**

*p < .05 ** p<0.01 *** p<0.001.

Figure 4. Plots of Means for Anxiety Change Scores by Parent's Educational Attainment and Parent's Occupation



Regression 7 (results shown in Table 8) predicts the policy impact on parents' anxiety by SES predictors, city level and other characteristics. Policy impact on parents' anxiety is measured as a continuous variable in a range from 0 to 5, where 0 represents anxiety significantly decreases, 2.5 represents anxiety doesn't change and 5 means anxiety significantly increases after policy. According to Model 1, the anxiety change scores are 0.46 ($p < 0.001$) significantly higher for parents in tier 1 cities than parents outside tier 1 cities. It means that in tier 1 cities, parents' perception of the impact of the double reduction policy on their anxiety level is not as positive as parents outside tier 1 cities. This finding match with my previous qualitative findings that the policy impact on parents' education anxiety in tier 1 cities is not as positive as that outside the tier 1 cities, because the competition pressure still remains in tier 1 cities.

Figure 4 visualizes the mean anxiety change scores for different subgroups. For each subgroup of parents' education levels and occupation, the 'Anxiety Change' score is higher in tier 1 cities (green line) than outside tier 1 cities (blue line). When the average score is higher than 2.5 (i.e., the median), it indicates that people in this subgroup generally believe that the policy impact is negative on their anxiety level. In tier 1 cities, parents with tertiary education backgrounds and parents who work as managers or professionals have a mean score higher than 2.5, therefore on average, the policy impacts are negative for them. One explanation is that these parents with higher SES are more likely to be exposed to information about the hidden competition through their social networks.

Discussion

6.1 Findings

6.1.1 Policy Impact on Parenting Styles across SES

In line with Lareau (2002), in the sample of this study, differences in intrinsic parenting ideas are observed among parents with different SES. In general, parents with lower SES or less educational experience prefer the concept of natural growth, and parents with higher SES or higher educational attainment prefer the concept of concerted cultivation. One major factor is that parents with various SES have different expectations for their children. According to the quantitative analysis findings, among parents of different educational backgrounds and occupations, those with tertiary education backgrounds, working as manual, service workers or self-employed are predicted to have significantly higher expectations of their children. Through the interview, it is found that many parents with lower SES expect their children to grow up happily and are willing to give their children more freedom. In contrast, parents with higher SES have more diversified expectations for their children and are more aware of the comprehensive requirements placed on talents' abilities in today's society, so they are more inclined to arrange their children's development. Some lower SES parents are preoccupied with life pressure and unable to devote time to arrange their children. In addition, parents with different educational backgrounds have different perceptions of the value of education. Parents who have more educational experience prefer concerted cultivation, while parents who lack education have a weaker sense of the value of education and are more willing to let their children grow up freely, regardless of their SES.

Before the double reduction policy, parents from different SES all tended to adopt the intensive parenting method centred on subject tutoring as extrinsic parenting practices, regardless of their SES. According to Bourdieu (1973), in modern Western

society, obtaining institutional recognition of cultural capital is beneficial for students to transform it into economic and social capital in the future. This theory is considered applicable in explaining social mobility in China (Li, 2021). As observed in interviews, although none of the respondents prioritized grades, most parents had high expectations for their children's academic performance and future degrees, with some middle-class parents regarding college admission as a minimum requirement. In line with the literature on credentialism, under the shock of the competition, children's obtaining a good educational credential has become a prerequisite for meeting other long-term expectations of parents for their children (e.g., living independently, choosing a career they like). Consistently, the quantitative analysis found no significant differences in parents' 'Intensive Parenting' scores between SES characteristics or cities. As rational choice theory holds, people weigh their preferences against external conditions and make decisions that do more good than harm. Institutional tutoring has become such a rational choice for parents to cope with the competitive pressure, for its high availability, high quality and peer effect. Therefore, before the double reduction policy, it is common for parents to sign up their children for shadow education, regardless of their intrinsic parenting ideas.

After the double reduction policy, outside tier 1 cities, the competitive pressure of parents is generally relieved, parents' parenting styles will gradually return to be in accord with their intrinsic ideas. Therefore, differences in parenting styles of parents with different SES characteristics are expected to be magnified; In tier 1 cities, the policy does not significantly alleviate or even deepen some parents' perception of external competitive pressure, therefore those parents will further intensify their intensive parenting.

Outside tier 1 cities, policies against out-of-school competition are more widely accepted, partly because equalizing policies and burden-easing policies are more effective in these areas. After the double reduction policy, some parents with low SES and low education levels will gradually return to 'natural growth' parenting styles,

while some parents with high SES and high education levels will incline to ‘concerted cultivation’ parenting styles and choose interest classes as a replacement. However, it is worth noting that quantitative studies did not find significant differences in participation changes in three types of tutoring among different SES. This may be because the effect of the policy is not significant in the short term. According to qualitative findings, this difference between SES will gradually enlarge among different SES outside tier 1 cities.

In tier 1 cities, as the education system is huge and relatively difficult to manage, the tutoring institutions that were suspended after the double reduction policy created a large supply of individual tutoring or other interest classes. Meanwhile, parents in tier 1 cities generally have higher expectations for their children. After the double reduction, academic competition and the discipline tutoring market are still surging beneath the surface. Therefore, in tier 1 cities, most parents are still dependent on the intensive parenting methods of the past, while gradually shifting from institutional to individual tutoring.

6.1.2 Policy Impact on Anxiety Levels across SES

After the double reduction, the return of more education responsibility to parents generally increases the anxiety levels of parents who lack parental education preparation, face implicit competition and still rely on subject tutoring. On the contrary, parents with a lower perceived level of competition and better parental education preparation will have an improvement in their educational anxiety levels. As for SES characteristics, differences between the two groups are mainly reflected in the residential city and the education background of parents: parents with lower educational levels and parents in tier 1 cities tend to be more anxious after policy; parents with higher education levels and parents who are outside tier 1 cities tend to be less anxious after policy.

Qualitative research finds that when the education scene is more returned to the family, the parents with lower education levels are more likely to be at a loss when they encounter education problems or have conflicts with their children. The more educated parents, on the other hand, are more likely to exhibit a blueprint of their parenting. In tier 1 cities, the perceived pressure of external competition keeps parents relying on after-school tutoring, while the higher price and declining quality of individual tutoring fuel their dissatisfaction and anxiety. At the same time, hidden forms of competition (such as cliques, and secret tests) also make parents who are exposed to this information more uneasy and anxious.

And this conclusion was confirmed by the regression model results. It is found that policy impact on parents' education anxiety in tier 1 cities is not as positive as that outside the tier 1 cities. In tier 1 cities, parents with tertiary education backgrounds and parents who work as managers or professionals on average perceived a negative policy impact on their anxiety. One explanation is that these parents with higher SES in tier 1 cities are more likely to be exposed to information about the hidden competition through their social networks.

6.2 Limitations

In this study, the student researcher recognizes the following three potential limitations.

First, the sample may lack the representativeness of the target population. It is mentioned in the quantitative analysis section that some subgroups occupied a smaller proportion than others, therefore it cannot be drawn a conclusion. As the sample recruitment is conducted through the snowball sampling method, it might not be representative of all parents of Grade 5-6 students in Guangdong.

Second, some results of quantitative analysis are not well explained. For example, the

results of regression models showed that compared with parents with higher education, parents with primary education were more likely to increase their participation in institutional tutoring, which was in conflict with the common situation of tutoring institutions being shut down. At the same time, in the interview, I found that 14 out of 16 parents had participated in private tutoring before the double reduction, but the results of the questionnaire survey showed that only 60.6% were involved in private tutoring. One possible explanation is that parents may feel sensitive to discuss policy evaluation, so they are reluctant to report risky information in the online survey setting.

Third, the validity of the questionnaire setup deserves further study. For example, how to measure the SES of Chinese households through questionnaires is still a controversial topic. The student investigator adopts the way of classifying education level and occupation to define the SES. As for information before the double reduction, respondents were asked to fill in according to memories. Respondents were asked to report their subjective feelings via the sliders. These measuring methods may lead to potential biases caused by subjectivity.

Conclusion

7.1 Conclusions

This research evaluates the heterogenous effect of the double reduction policy on parents' parenting styles and anxiety levels across SES. Among different levels, the city acts as an intermediating channel through which the policy impact differs across household characteristics. In tier 1 cities, due to the large education system and the legacy of shadow education, the competition for education resources remains fierce, so parents are more likely to feel anxious and will more commonly rely on intensive parenting, as a response. Outside the tier 1 cities, the double reduction policy has significantly relieved the competition in the education environment. After the external competition pressure is eased, parents are more inclined to return to their intrinsic parenting ideas, and the education anxiety is to some extent reduced.

Through qualitative research, it is found that the differences in parenting styles between parents due to different SES characteristics are more embodied in the level of intrinsic ideas. Parents with higher SES and higher education levels have more educational expectations for children and perceive the education values better, therefore they are generally more in favour of the 'concerted cultivation'; Contrarily, parents with lower SES and education levels are more inclined to the concept of 'natural growth'. This internal difference is also reflected in the quantitative findings. Parents who have received higher education and engaged in non-agricultural work show significantly higher expectations for their children.

However, due to the prevailing high expectations of parents for children's education, under the impact of fierce educational competition, parents with different intrinsic parenting ideas finally show a high degree of convergence in educational practices -- actively arranging children's after-school life and seeking additional educational resources for children. Through the survey data analysis, it was found that none of the

SES indicators had a significant predictive ability for intensive parenting scores. In other words, there was no significant difference in intensive parenting engagement between parents with different SES. This confirms the qualitative findings. Before the policy, the abundance of affordable and accessible subject institutional tutoring provided a ‘buffer zone’ for parents of different SES against the shock of educational competition. After the implementation of the double reduction policy, some parents' perception of external competition pressure has been alleviated. It can be predicted that their educational practices will gradually return to be in accord with their intrinsic parenting ideas, and the difference in the parenting styles between different SES will be amplified. At the same time, the policy has also deepened the perception of competitive pressure among other parents, especially those in tier 1 cities, and will further strengthen their intensive parenting.

It is worth mentioning that although many institution practitioners and parents mentioned the extensive increase of private education and guidance in tier 1 cities in the interviews, no significant difference was found in the regression models about changes in subject tutoring participation across SES predictors or city levels. This may be attributed to respondents' concerns about reporting illegal topics such as hidden subject tutoring in online survey settings.

In terms of parents’ anxiety levels, the two 'reductions' of the policy: reduction of shadow education and reduction of the academic burden, reduce the participation of both schools and training institutions in children's education, so that the responsibility of after-school education has returned more to parents. After the double reduction policy, the deepening of some parents' education anxiety is mainly attributed to (1) insufficient preparation in family education; (2) uncertainty about the external competition; (3) lower cost performance of subject tutoring. Generally speaking, parents with a high perception of competition level and high dependence on discipline guidance get more anxious after the double reduction, while parents with a low perception of competition level and better family education preparation have lower

anxiety levels. Through qualitative research, it is found that parents with less education or those in tier 1 cities are more inclined to the former, so their anxiety level may increase. This finding is also supported by the regression model results: parents' perception of the policy impact on education anxiety in tier 1 cities is not as positive as that outside tier 1 cities.

7.2 Implications

"What is a better education?" Is always a question worth thinking about. The double reduction policy is meant to be a positive step forward from exam-oriented education to more comprehensive education and less competitive pressure. It can be expected, however, that the increased responsibility of the parents for education may further amplify differences in the cultural and economic capital of the family. To balance equity and efficiency, in addition to restricting the competition of educational resources outside school, more supplementary policies may be needed to improve parents' educational awareness and empower parents to handle the responsibility of family education better.

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Appendix

Appendix 1. Introduction of Some Burden-Easing Policies in China

	Prehistory (1978–1989)	*Stage 1*: Emergence and first boom of shadow education market (1990–1999)	*Stage 2*: Institutionalization and second boom (2000–2010)	*Stage 3*: Deepening institutionalization, specialization and capitalization (2011–2018)	*Stage 4*: Massification, digitalization and integration (since 2018)
Features	Public school tutoring supplemented by emerging scattered home tutoring	Rapid expansion of post-primary education led to first boom. Market takes shape with dominant involvement of teachers and schools. Emergence of urban tutoring institutions run or managed by public institutions, teachers and/or private actors; tutoring responds to growing family demand for examination preparation and access to key schools.	Second boom accompanying second round of mainstream expansion, facilitated by expanded higher education and policies to reduce study burden and to ban tutoring in schools. Tutoring becomes institutionalized in diversifying modes, content and pedagogical approaches. Expansion of companies hiring teachers, college students and later their own professional tutors. Companies and schools collaborate to "return" study load cut in schools.	Still institutionalization stage, but with specialization, standardization and deepening division of labour. Tutoring companies become attractive in capital market, embarking on application of technology to expand and attract investment. More regulations to prohibit schools and in-service teachers from providing tutoring, which further delegitimized schools and teachers as tutoring suppliers.	Age of massification, digitalization and integration facilitated by technology; fierce national regulation results in more regulated market, excludes teachers and small centres, but indirectly drives development of online tutoring that is more difficult to regulate. More capital investment in online education, and more online companies go public; online tutoring expands to lower-tier cities and even rural areas. Online tutoring dramatically boosted by COVID-19, accustoming millions of students to digital learning.
Major providers	Schools and teachers	Schools and teachers, with growing participation of college students and tutoring companies in urban areas.	Tier 1–2 cities: tutoring companies, teachers and schools, and college students; Tier 3–4 cities: teachers and schools, and local centres; Rural and remote: teachers and schools.	National market leaders expand across country to lower-tier cities. More online tutoring companies. Tier 1–2 cities: tutoring companies, teachers (increasingly pushed out of market but still popular, especially in Grades 9 and 12), and college students; Tier 3–4 cities: teachers, local institutions and big players.	Official statistics estimate half million tutoring companies, almost equivalent to total number of schools – and many unregistered tutorial enterprises still operating. Teachers still active, especially in low-tier cities and rural areas, but more hidden due to official prohibition.
Dominant powers	Strong state actors; few non-state actors. Tutoring organized by schools as legitimate part of school curriculum.	Strong state actors in private sector contribute to market growth. First boom heavily depends on schools and teachers, supplemented by college students and emerging tutoring institutions.	State actors remain strong, but gradually give power to market. Many tutoring institutions employ teachers as part-time tutors, and partner with teachers/ schools for clients. Major players develop professional tutoring and management teams to gain independence. Market gains force in largely unregulated environment, absorbing resources from both public and private sectors.	Following impact from previous decades, market not only takes hold, but also challenges and damages state provision. From conspiracy to competition: tension between schooling and tutoring companies creates negative effects and challenges legitimacy of schooling. Expanding capital and technology; teachers losing competition at primary level in Tier 1–2 cities, and threatened in Tier 3–4 cities by online and dual-teacher tutors. Local companies threatened by strong and resourceful outsiders.	Power struggles among capital, technology and state. State tries to regulate tutoring with strong administrative machinery, yet market continues to grow, taking advantage of COVID-19 crisis. Big tutoring companies and tech companies providing tutoring are dominant and aggressive market players. Tutoring by teachers and schools delegitimized by 2018 national policy to prohibit (again) their involvement in tutoring.

Cited from Zhang & Bray (2021).

Appendix 1. Introduction of Some Burden-Easing Policies in China (Continued)

	Prehistory (1978–1989)	*Stage 1*: Emergence and first boom of shadow education market (1990–1999)	*Stage 2*: Institutionalization and second boom (2000–2010)	*Stage 3*: Deepening institutionalization, specialization and capitalization (2011–2018)	*Stage 4*: Massification, digitalization and integration (since 2018)
School space	Free or low-fee tutoring organized by schools for: (i) intensive preparation for high-stakes examinations, and (ii) remedial and enrichment classes for low and high achievers.	Paid or free tutoring for examination preparation, Olympiad training, and enrichment or remedial support. Olympiad training reduced by 1995 government ban, to alleviate study load.	Government bans tutoring by schools to reduce study burden on students. Tutoring reduced on school premises; some schools move tutoring to company premises. Many self-employed tutors (including teacher–tutors) move to tutoring institutions.	More policies to reduce study load. Tutoring further reduced on school premises, but some schools outsource such demand to tutoring companies. Some weak schools also outsource online tutoring and teacher training to leading companies.	Partnerships with tutoring companies banned and thus become hidden. However, as schooling moves online during COVID-19 crisis, free support from companies enters schooling in digital space.
Family space	Scattered face-to-face, in homes of tutors or students; mainly free but some fee-charging.	Expansion of fee-charging home tutoring by teachers, college students and other private actors.	Further expansion of face-to-face home tutoring, but more institutionalized as more companies send tutors to families. Growing urban demand for online tutoring.	Face-to-face home tutoring gradually loses market to online tutoring, made attractive and interactive by technological innovations.	Online tutoring becomes only form available during COVID-19 crisis. Integration of three learning spaces (schools, families and shadow education) in students' homes.
Shadow education space	Scattered provision of fee-charging tutoring in schools and homes; very limited shadow education in other spaces such as institutions for community education.	In addition to paid tutoring in schools and homes, expanding in tutorial centres and other spaces.	Tutoring institutions proliferate, mostly operating in commercial and residential premises. Many teachers join companies as part-time tutors. Online tutoring germinating in virtual space.	Online tutoring spreads rapidly. Traditional mode supplemented by dual-tutor and online; division of labour and specialization in curriculum and instruction; tutoring content deepens and covers wider spectrum of curricula delivered in diverse modes; fierce competition but still opportunities.	Challenging market environment; small tutorial centres squeezed by state policy and by aggressive capital. Tutoring by teachers more hidden. Large players and tech companies compete during COVID-19 crisis. Commercial war for online users continues in post-crisis era.
Learning spaces and power dynamics	Shadow education mainly in school and family spaces, subject to schools and parents. Much overlap of shadow education and other two spaces.	Shadow education space expanded beyond schools and families, constituting third learning space. Teachers and school leaders utilize/manipulate power in schools to secure their shadow education activities.	Institutionalization of shadow education increases independence of tutoring institutions from schools and teachers, and thus expands shadow education space outside schools and families. Hidden curriculum and human resources transfer from state to market.	Previous trend continues; power of capital and development of professional tutors displace teachers and schools; major companies develop independent curriculum, no longer follow schools; market takes control of shadow education curricula and pedagogy that challenge official curriculum; boundaries blurred by public–private partnerships.	Previous trend continues; COVID-19 increases power of technology and capital in digital learning; online tutoring greatly expands shadow space; state tries to claim power over education by regulating market, but digitization imposes barriers; market too entrenched to be under direct and tight control, but some aspects of regulation succeed and facilitate self-regulation.
Relationships among family, school and shadow education (SE) spaces					

Cited from Zhang & Bray (2021).

Appendix 2. Lareau's Theoretical Framework of Two Parenting Styles

Dimension Observed	Childrearing Approach	
	Concerted Cultivation	Accomplishment of Natural Growth
Key elements of each approach	Parent actively fosters and assesses child's talents, opinions, and skills	Parent cares for child and allows child to grow
Organization of daily life	Multiple child leisure activities are orchestrated by adults	Child "hangs out" particularly with kin
Language use	Reasoning/directives Child contestation of adult statements Extended negotiations between parents and child	Directives Rare for child to question or challenge adults General acceptance by child of directives
Social connections	Weak extended family ties Child often in homogenous age groupings	Strong extended family ties Child often in heterogeneous age groupings
Interventions in institutions	Criticisms and interventions on behalf of child Training of child to intervene on his or her own behalf	Dependence on institutions Sense of powerlessness and frustration Conflict between childrearing practices at home and at school
Consequences	Emerging sense of entitlement on the part of the child	Emerging sense of constraint on the part of the child

Cited from Lareau (2002).

Appendix 3. Introduction of Some Policies Regulating Shadow Education in South Korea

The Development of the South Korean Shadow Education

- 1968 No Middle School Entrance Examination Policy
- 1978 High School Equalization Policy
- 1980 7.30 Educational Reform Measure
- 1980s – 1990s Reforming the college entrance examination system and public education system for reducing household expenditure on shadow education
- 2000 – 2004 Introduction of educational policies for reducing household expenditure on shadow education by enhancing public education
- 2009 Reducing household expenditure on shadow education by increasing school autonomy

	Different types of policy responses			
	Equalization of schools	Prohibition of shadow education	Enhancement of public education	Provision of supplementary tutoring program
Assumption	Shadow education practices can be effectively controlled	Shadow education practices can be effectively controlled	Shadow education practices cannot be effectively controlled	Shadow education practices cannot be effectively controlled
Definition of problem	Intensive competition for entering elite universities	The inequalities in educational opportunities	The deficiency of public education induces the demand of shadow education	The inequalities in shadow educational opportunities
Approach	Causal treatment	Symptomatic treatment	Causal treatment	Symptomatic treatment
Policy goal	Relieving competition intensity and reducing the demand of shadow education	Prohibiting the use of shadow education	Reducing demand mechanisms	Reducing the gap in shadow education opportunities
Specific policy measures	Abolishing the high-stakes exams and equalizing school intakes and resources	Banning private tutoring with legal coercion	Reducing the student–teacher ratio and introducing differential curricula. Measures depend on the conceptualization of the quality of public education	Providing after-school programs and private tutoring through EBS and the e-learning system
Adverse effects	Weakening public education and increasing reliance on shadow education	Illegal and secret private tutoring practices emerging and the unit cost of private tutoring rising	Less tangible immediate and positive effects	Fostering shadow education in mainstream schooling

Cited from Lee, Lee & Jang (2010)

Appendix 4a. Recruitment Advertisement of Interviewees

牛津大学 UNIVERSITY OF OXFORD
教育系 DEPARTMENT OF EDUCATION

部门地址：15 Norham Gardens, Oxford, OX2 6PY
电话: (+44)(0)1865274024 Fax: (+44)(0)1865274027
邮箱: general.enquiries@education.ox.ac.uk, www.education.ox.ac.uk

访谈人选征集

您好！我的名字是樊子贤，现在在牛津大学就读教育学硕士学位。

我目前正在进行硕士阶段的论文研究，需要征集相关的访谈人选。研究的主题是关于：减少课外作业和暂停培训机构后，小学生父母教育观念和课外实践的变化和影响。

由于研究限制，目前需要采访广东省的小学 5-6 年级学生的老师和家长，人选需要符合以下条件：

1）广东省小学 5-6 年级学生的家长；

2）目前任教小学 5-6 年级语文，数学或英语的老师（或班主任）；

3）可以接受线上访谈的形式（语音或视频）。

访谈时长约 15-30 分钟，完成后会有相应的报酬。访谈目的仅用于硕士论文研究，数据隐私将受牛津大学研究伦理委员会的监管和保护。同时，所有可识别的个人信息（如名字，学校等）将不会被录入。

您如有意进一步了解或参与，欢迎添加我的微信：Fan1471492478 或短信联系：15207586451。感谢！

Appendix 4b. Recruitment Advertisement of Survey Respondents

牛津大学 UNIVERSITY OF OXFORD
教育系 DEPARTMENT OF EDUCATION

部门地址： 15 Norham Gardens, Oxford, OX2 6PY
电话: (+44)(0)1865274024 Fax: (+44)(0)1865274027
邮箱: general.enquiries@education.ox.ac.uk, www.education.ox.ac.uk

调查问卷招募

您好！我的名字是樊子贤，现在在牛津大学就读教育学硕士学位。

我目前正在进行硕士阶段的论文研究，研究的主题是关于：

减少课外作业和暂停培训机构后，小学生父母教育观念和课外实践的变化和影响。

调查对象：**广东省 5-6 年级小学生的家长**

如果您符合以上条件，您的答复对本研究将非常宝贵。您可以点开链接：

https://oxfordeducation.eu.qualtrics.com/jfe/form/SV_9NCITKq9qWRQ4M6

或扫描下方二维码回答。回答时间大致需要 5-8 分钟，您的个人信息将会被保护和匿名。

如果您对研究有任何问题，欢迎添加我的微信：**Fan1471492478** 或短信联系：**15207586451**。

诚挚感谢！

Appendix 5. Description of the Interviewees

Parents					
Alias	**Role**	**City/County**	**Educational Attainment**	**Occupation**	**SES Classified**
Q	Mother	Zhongshan	Middle School	Agriculture	Working-Class
G	Mother	Zhaoqing	Primary School	Agriculture	Working-Class
T	Mother	Dinghu	Technical Secondary	Agriculture	Working-Class
N	Father	Shenzhen	Technical Secondary	Technical	Working-Class
A	Father	Qingyuan	Technical Secondary	Technical	Working-Class
F	Father	Guangzhou	Primary School	Self-Employed	Working-Class
P	Father	Foshan	Undergraduate	Managerial	Middle-Class
C	Father	Guangzhou	Undergraduate	Managerial	Middle-Class
H	Mother	Shenzhen	Technical Secondary	Service	Middle-Class
Z	Mother	Maoming	Undergraduate	Governmental	Middle-Class
J	Father	Huizhou	Undergraduate	Managerial	Middle-Class
M	Mother	Dongguan	High School	Self-Employed	Middle-Class

Y	Father	Shenzhen	Undergraduate	Governmental	Middle-Class
B	Mother	Shenzhen	High School	Service	Middle-Class
K	Mother	Guangzhou	High School	Service	Middle-Class
Lily	Mother	Shenzhen	Undergraduate	Managerial	Higher-Class

Teachers

Alias	Subject	City/County	School Type	Grade
L	Music	Shenzhen	private	4-5
D	Chinese	Zhaoqing	public	6
X	English	Jieyang	private	5
E	Maths	Jieyang	Public	5
V	Chinese	Guangzhou	public	6

Practitioners

Alias	Role
W	Former Executive
O	Tutor

Appendix 6a. Interview Outlines for Parents

家长访谈主题提纲

*** 如不方便提供相关信息或回答相关问题，您可以随时选择拒绝回答或退出访谈。**

如有疑问，您可以随时联系研究者：

樊子贤 （联系方式：15207586451；邮箱：1471492478@qq.com）

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1. 背景信息：

1) 家长目前的工作类型、所在的城市、受教育程度？

2) 孩子目前就读的年级？学校类型（公立还是私立）？

2. 课外辅导消费/教育投资：

1) 今年的教育支出情况？教育支出的方向？

学杂费？课外培训？兴趣班？夏令营？

什么样的夏令营/兴趣班/私教辅导？

2) 与去年相比，今年的教育支出是否有所改变？为什么？

消费的方向有什么不同

消费投资水平的改变受什么影响 （双减政策出台自身认识的改变、社会提供服务选择的减少、家庭收入）

3) 是否参加过校外培训机构？原因？

参加过什么类型的培训机构？为什么？

* 分类：学科类培训（应试为导向）、兴趣班（艺术类、体育竞技类、书法文学类）、夏（冬）令营、带孩子参观见学。

培训机构会辅导些什么？（超前辅导、提前教学、补短板教育、强化应试、素质辅导或进阶教育）

4) 哪些因素会促使你做出教育支出的决定？

您如何决定在孩子的教育上花什么钱、怎么花？

教育焦虑、同辈压力、市场驱使？

5) 您对以前/现在的教育消费水平满意吗？

您是否认为在教育的消费/投资是值得的呢？

从您个人的角度来说，您更愿意在哪些教育方面进行消费？

您对教育产品的定价有什么看法？& 在过去？

6) 您如何看待教育消费水平的变化？

您是否了解身边其他家长的教育消费理念？是否认同？

3. 教育理念：

1) 您对孩子的长远发展有什么期望呢？孩子现阶段的表现是否符合您的期望？

您希望自己的孩子成为一个怎么样的人？需要具备怎样的品质？

您会重点关注孩子成长的哪些方面？您会经常关心孩子的学习表现吗？

从您个人的角度来说，请按您心目中重要程度排名：文凭（考取一个好的大学）、素质、学习习惯、独立思考、快乐成长。

您会对孩子的学习表现有怎样的期望？

孩子现阶段的表现是否符合您的期望？

2) 作为家长，您认为自己会如何帮助自己的孩子达成期望？

您会做出那些努力来帮助孩子达成自己的期望？

您认为在孩子的成长中，家长扮演着怎样的一个角色？家长在多大程度上，对孩子的教育和未来负责？

您是否认为通过与学校和教育机构的合作，家长可以更好的帮助孩子达成期望？

您对自己作为家长的表现是否满意？

3) 一般来说，您对孩子的教育感到焦虑吗？如果有，您的焦虑主要来自于哪里？

如果您对孩子的教育感到焦虑，是什么原因导致的？

您满意孩子现阶段的学习表现吗？

“双减”后，学校是否对学生成绩进行排名，是否公开？您如何了解孩子的排名情况？

如果不公开，您认为缺乏对身边同龄学生排名的对比，是否会加深焦虑？

您认为哪些因素可以缓解您的焦虑？您期望教育系统发生怎样的改变？

如果孩子排名不理想，您是否有强烈请课外辅导的欲望？

4) 取消校外机构辅导和减少作业后，你的心态有变化吗？如果有，你能解释为什么和如何变化吗？

您认为取消校外机构辅导和减少作业会改善目前的教育环境吗？

机构辅导的暂停是否缓解了您的教育焦虑？

如果不是，您会采取怎样的反应以应对发生的改变？

4. 孩子的课余时间和行为模式：

1) 与去年相比，您觉得您孩子的课业压力是否有所变化？

您认为孩子的课余时间是否有变化？如何变化（下课时间/周末）？

2) 您孩子的课余行为模式是否有变化？

孩子在课余时间一般会做些什么？与过去相比，孩子现在是否更加开心了？

孩子周末一般会如何安排？

您孩子课外锻炼或者参与兴趣爱好的时间是否有变化？

3) 您对课余时间和行为的变化有什么看法？

是否有助于孩子全面发展？

是否影响了您个人的时间安排呢？

4) 课余时间的变化如何影响您的家庭教育？

您是否有充裕的时间陪伴自己的孩子？

您是否会倾向于寻求学校和机构的帮助，来帮助孩子提高自我？

5. 教育环境：

1) 您怎么看待目前的教育系统的竞争状况？您认为这与去年相比有所改变吗？

您孩子班级内的竞争状况如何？您是否担忧孩子未来的升学？

您对于当前和未来的社会环境和教育体系保持乐观吗？（孩子们是否在面对一个竞争更激烈的社会环境？）

与去年相比，竞争压力是否有所减少呢？

2) 您认为在当今社会，教育能在多大程度上改变人的命运？

教育如何改变人的命运？

您认为是知识还是文凭对人的影响更大呢？

3) 您认为现在的教育系统公平吗？

您认为教育资源的分配是否公平呢？

您认为家庭、学校和机构的参与是否会影响孩子的成绩？

您是否会对自己及身边其他家长的行为进行比较呢？

4) 反应和举措？

您是否会考虑让孩子寻求非常规高考的渠道？（如艺考、特招、部队/职业学校或出国等）

6. 与学校和老师的互动：

1) 孩子是否有向您反应过课堂上的学业困难？您是如何处理或解决的？

是否会向老师反应？反应效果如何？

您会自己帮助孩子解决学业上的困难吗？

2) 与去年相比，孩子是否遇到了更多的学业困难？为什么？

在过去，孩子遇到学业困难，您会首先考虑向谁寻求帮助？

参与培训机构，是否有缓解孩子的学业困难呢？

3) 与去年相比，您认为学校和老师是不是承担了更多的责任？

您与学校和老师的互动在过去的一年里是否有变化呢？

7. 双减态度：

1) 总的来说，您如何看待双减政策？是否有利于教育系统的改善？

是否减轻了孩子的负担？家长的压力？

是否影响了教育公平？

您是否乐意看到课外培训机构的退出？

2) 双减政策是否对您有产生影响呢？影响多大？

减轻了您的教育焦虑吗？

多大程度影响到了您的教育观念？是正面还是负面？

您和其他家长都有怎样的具体反应？

3) 双减政策过后，您会考虑请私人辅导或者寻求其他渠道的帮助吗？考虑的因素有哪些？

是否有了解或参与过私人辅导呢？

价格？难度？

Appendix 6b. Interview Outlines for Teachers

老师访谈主题提纲

*** 如不方便提供相关信息或回答相关问题，您可以随时选择拒绝回答或退出访谈。**

如有疑问，您可以随时联系研究者：

樊子贤 （联系方式：15207586451；邮箱：1471492478@qq.com）

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1. 个人信息：

1)您教哪个年级？教哪门课？负责多少学生？学校所在的城市和类型？

2)您每天工作多长时间？一周工作几天？课时多少？

2. 感知政策变化与教学压力：

1)总的来说，您觉得作为小学老师，您的工作压力大吗？压力主要来源于哪些方面？

2)自去年 9 月以来，您觉得您的教学方式有什么变化吗？

授课—课程节奏？授课的内容和难度？

课后—作业布置和批改？对优生和差生的辅导？考试的频率和难度？

课后服务—课后延时服务的参与及设计？

3)校方对于双减政策的颁布有何反应？是否对您产生了影响呢？

校方对政策的反应有多大？持何种态度？

工作任务和时间安排是否有变化？

学校是否施加或减少了压力？考核的方向和指标有什么变化吗？

4)小升初入学政策的调整对教学产生了什么影响呢？

学生、家长和老师的压力和观念如何变化呢？

3. 学生的教育表现：

1)去年 9 月之前，您所任教的学生参加课外辅导的情况：

参加课外辅导的学生多吗？参与的辅导类型？

您觉得课外辅导对于学生的表现是否有影响？

什么样的学生会更倾向于参加课外培训辅导？

2)课外培训机构取消后，学生表现差异/能力差距是否增大或减少？

是否出现更多跟不上进度的学生？提前学习的学生是否减少？班级的能力是否更平均？

学生的表现分布是否更加分散或者集中？

双减政策对于过去参加课外辅导的学生产生了什么影响呢？

2)自去年 9 月以来，学生的学习态度是否有显著变化？

学习态度如何变化？有哪些因素可能带来影响？

3)学生具体成绩排名不公布后，对教学或学生积极性是否有显著影响？偏向积极还是消极？

对于教学方法会带来什么改变吗？

学生的积极性以及课后反馈是否会发生变化？

4. 家长的教育理念：

1)从老师的角度看，您认为不同家长的教育观念有何差别？

您认为现在家长普遍对于孩子存在怎么样的期望？（学习表现等）

如何看待虎式教育及自然成长的教育观念？在您所接触的家长中是否普遍存在呢？

什么家庭因素会影响家长的教育观念呢？

2)自去年 9 月以来，家长是否有更多或更少的焦虑？

家长会如何向老师反馈？焦虑的来源是什么？

3)从老师的角度看，家长对于双减政策如何反应？

家长是如何看待双减政策的呢？

教育观念、家庭教育行为是否因为双减政策而发生了变化？

不同家长群体对于政策的反应是否不同？

自去年 9 月以来，家长和老师的互动是否更加紧密呢？

双减政策后，是否会有更多家长减少了对孩子的干预呢？

4)您如何看待家长和老师在孩子的教育中所担当的职责？

您认为孩子的学习表现、态度和习惯在多大程度上分别取决于家长或老师的努力？

与去年相比，您认为学校和老师是不是承担了更多的责任?

5. 双减态度：

1)总的来说，您如何看待双减政策？是否有利于教育系统的改善？

您认为双减政策是否能减轻家庭教育的负担呢？

您认为双减政策是否影响了教育公平？

2)从您的角度，您认为现在是否有许多家长会通过私教、集体辅导等继续接受学科培训？

您认为接受学科课外培训的情况还继续存在吗？

1. Background Information

A1. Which grade is your child currently enrolled in?

1. Grade 5
2. Grade 6
3. Others

A2. What type of school is your child currently attending?

1. Public
2. Private (non-bilingual teaching)
3. Private (bilingual teaching)

A3. What is your educational level?

1. No education
2. Elementary school
3. Junior high school
4. Technical secondary school/technical school
5. Vocational high school
6. General high school
7. Polytechnic degree
8. Undergraduate degree
9. Graduate student and above

A4. What is your current occupation?

1. Officials and staff of government and public sectors
2. Middle and senior managers of enterprises/company (including owners of private enterprises)
3. Teachers, engineers, doctors, lawyers
4. Skilled workers (including drivers)
5. General workers in production and manufacturing
6. General workers in commercial and service industries
7. Self- employed
8. Farmers
9. Unemployed, unemployed, laid off
10. Others (please specify __)

A 5. What is your current city?

1. Guangzhou 2. Shenzhen 3. Dongguan 4. Foshan 5. Huizhou 6. Zhuhai 7. Zhongshan * Tier1
8. Zhaoqing 9. Jiangmen 10. Shantou 11. Zhanjiang 12. Jieyang 13. Qingyuan 14. Meizhou 15. Chaozhou * Tier2
16. Maoming 17. Shaoguan 18. Yangjiang 19. Heyuan 20. Shanwei 21. Yunfu * Tier3

A6. Do you hold a local residential certificate (Hukou) in your city?

1. Yes 2. No

A7. Your child's current grades generally rank in the class?

1. Upstream 2. Midstream 3. Downstream

2. Participation of afterschool tutoring

B1. Before September 2021, did your child participate in the following types of afterschool tutoring?

1. Discipline (Chinese, mathematics and English) training institutions (Subject area)
2. Discipline private tutoring
3. Interest, development class
4. None of the above

B1.1 If yes, before September 2021, how many hours does your child need to attend discipline training institutions per week?

1.1 hour and below
2.1-2 hours
3.2-3 hours
4.3-4 hours
5.4-5 hours
6.5 hours and above

B1.2 If yes, before September 2021, how many hours of discipline private tutoring does your child need to attend a week?

1.1 hour and below
2.1-2 hours
3.2-3 hours
4.3-4 hours
5. 4-5 hours
6. 5 hours and above

B1.3 If yes, before September 2021, how many hours does your child need to attend interest and extension classes a week?

1.1 hour and below
2.1-2 hours
3.2-3 hours
4.3-4 hours
5.4-5 hours
6.5 hours and above

B2. Currently, has your child participated in the following types of after-school services?

1. Discipline (Chinese, mathematics and English) training institutions
2. Discipline private tutoring

3. Interest, development class 4. None of the above

B2.1 If yes, at present, how many hours does your child need to attend discipline training institutions per week?

1.1 hour and below
2.1-2 hours
3.2-3 hours
4.3-4 hours
5.4-5 hours
6.5 hours and above

B2.2 If yes, at present, how many hours of discipline private tutoring does your child need to attend a week at present?

1.1 hour and below
2.1-2 hours
3.2-3 hours
4.3-4 hours
5.4-5 hours
6.5 hours and above

B2.3 If yes, at present, how many hours does your child need to attend interest and development classes a week?

1.1 hour and below
2.1-2 hours
3.2-3 hours
4.3-4 hours
5.4-5 hours
6.5 hours and above

B3. At present, what is the proportion of children's education expenditure in family income?

(Choose from 0 %-100%.)

B4. Has the child's education spending changed compared to September 2021?

1. Significantly reduced
2. Slightly reduced
3. Basically unchanged
4. Slightly increased
5. Significantly increased

B5. What is your attitude towards your child's participation in afterschool tutoring?

1. Active reduction
2. Passive reduction (by choice, necessity)
3. Basically no effect
4. Continue to increase

3. The ideology of family education

C 1. Regarding your child's educational expectations, please select how well you fit the description below:

Educational expectations

(1) I expect my child to develop in an all-round way. (slider)

1. Very agree
2. Slightly agree
3. Neutral
4. Slightly disagree
5. Very disagree

(2) I expect my child's academic performance to be at least better than the class average. (slider)

1. Very agree
2. Slightly agree
3. Neutral
4. Slightly disagree
5. Very disagree

(3) I expect my child to enter a good university in the future. (slider)

1. Very agree
2. Slightly agree
3. Neutral
4. Slightly disagree
5. Very disagree

C2. Regarding your participation in family education, please select how well you fit the description below:

family involvement

(1) I am very active in arranging my children's education and life. (slider)

1. Very agree
2. Slightly agree
3. Neutral
4. Slightly disagree
5. Very disagree

(2) I think parents need to let go and let their children grow up freely. (slider)

1. Very agree
2. Slightly agree
3. Neutral

4. Slightly disagree
5. Very disagree

(3) I think parents need to be more involved in their children's growth to help children better realize their potential. (slider)
1. Very agree
2. Slightly agree
3. Neutral
4. Slightly disagree
5. Very disagree

(4) I prefer to seek opportunities provided by educational institutions (such as interest classes, tutoring, etc.) for my children. (slider)
1. Very agree
2. Slightly agree
3. Neutral
4. Slightly disagree
5. Very disagree

4. Changes in anxiety level

D1. In general, do you feel anxious about your child's education: (slider)
1. Very anxious
2. Relatively anxious
3. Neutral
4. Relatively not anxious
5. Not anxious at all

D2. Which of the following are the main factors that cause your anxiety about your child's education (multiple answers): (slider)
1. Family factors (such as not enough time to accompany, poor family atmosphere, etc.)
2. External pressure (such as peer competition from other parents & children)
3. Financial burden (the costs of education expenditure are too heavy)
4. The child does not meet expectations (such as poor performance, disobedience, etc.)
5. Worries about the future (perceived pressure for further studies, pressure for employment, etc.)
6. Others (please specify __)
7. I don't feel anxious.

Dummy code
D3. In general, do you think that the implementation of the double reduction policy will make your anxiety level about child's education (slider):

1. Significantly lightened
2. Slightly lightened
3. No effect
4. Slightly deepened
5. Significantly deepened
6. It's hard to say/not concerned

5. Attitudes towards double reduction

E1. In general, how do you view the impact of the double reduction policy on family education? (slider)

1. Obvious positive impact
2. Slightly positive impact
3. No impact
4. Slightly negative impact
5. Obvious negative impact

E2. Has the implementation of the double reduction policy affected the burden of family education? (slider)

1. Significantly reduced
2. Slightly reduced
3. No effect
4. Slightly increased
5. Significantly increased
6. It's hard to say/not concerned

E3. Do you think the double reduction policy is beneficial to children's education and growth? (slider)

1. Beneficial
2. No effect
3. Unfavorable
4. Hard to say/no attention

E4. How do you think the double reduction policy affects competition/"involution" in education? (slider)

1. Significantly reduced
2. Slightly reduced
3. No effect
4. Slightly increased
5. Significantly increased
6. It's hard to say/not concerned

E5. After the implementation of the double reduction policy, are you willing to continue to seek

subject tutoring for your child through other channels (such as private tutoring, small class tutoring, etc.)?

1. Strongly willing 2. Relatively willing 3. It depends on the situation
4. No willingness

E6. If you have other views on the double reduction policy and family education, please share or

Thank you!

Appendix 8. Descriptive Statistics

Variable	Frequency	Percent	Valid Percent	Cumulative Percent
Grade				
5	612	49.4	49.4	49.4
6	627	50.6	50.6	100
Total	1239	100	100	
School Type				
Public	1118	90.2	90.2	90.3
Private (Chinese)	60	4.8	4.8	95.2
Private (Bilingual)	60	4.8	4.8	100
Total	1239	100	100	
Parent's Education Attainment				
Less than primary	198	16	16	16
Secondary	700	56.5	56.5	72.5
Tertiary	340	27.4	27.5	100
Total	1238	99.9	100	
Parent's Occupation				
Public Sector	72	5.3	5.3	5.3
Managerial	71	5.2	5.2	10.5
Professional	127	9.3	9.3	19.9
Technical	55	4.0	4.0	23.9
Manufactural	139	10.2	10.2	34.1
Service	139	10.2	10.2	44.3
Self-employed	236	17.3	17.4	61.7
Farmer	17	12.5	12.5	74.2
Unemployed	580	4.3	4.3	78.5
Others	293	21.5	21.5	100
Total	1360	99.8	100	
City Tier				
Tier 1	195	15.7	15.9	15.9
Tier 2	45	3.6	3.7	19.6
Tier 3	983	79.3	80.4	100
Total	1223	98.7	100	
Residential Status				
Local (same with city of residence)	913	73.7	73.7	73.7
Nonlocal	913	73.7	73.7	100
Total	1239	100	100	
Grade Ranks (Children's)				
Upstream	383	30.9	30.9	30.9
Midstream	736	59.4	59.4	90.3
Downstream	120	9.7	9.7	100
Total	1239	100	100	

Attitude towards tutoring consumption after policy				
Reduction by choice	457	36.9	36.9	36.9
Reduction by necessity	100	8.1	8.1	45
Continue to Increase	61	4.9	4.9	49.9
No Impact	457	50.1	50.1	100
Total	1239	100	100	
Change of Tutoring Participation After Policy				
Institutional Discipline Tutoring				
Decrease	111	9.0	9.0	9.0
No change	1053	85.0	85.0	94.0
Increase	75	6.1	6.1	100
Total	1239	100	100	
Private Discipline Tutoring				
Decrease	51	3.5	3.5	3.5
No change	1145	92.4	92.4	95.9
Increase	43	4.1	4.1	100
Total	1239	100	100	
Interest Class				
Decrease	183	14.8	14.8	14.8
No change	921	74.3	74.3	89.1
Increase	135	10.9	10.9	100
Total	1239	100	100	

Variable	**N**	**Mean**	**SD**	**Min**	**Max**
Educational Expenditure					
The proportion of household income spent on education	1239	29.70	19.13	0	100
Tutoring Participation					
Before Policy: Hours Spent on Tutoring per week (Before September 2021)					
Institutional Discipline Tutoring	1239	0.51	1.49	0	10
Private Discipline Tutoring	1239	0.27	1.23	0	10
Interest Class	1239	0.77	1.56	0	10
After Policy: Hours Spent on Tutoring per week (now)					
Institutional Discipline Tutoring	1239	0.4	1.38	0	10
Private Discipline Tutoring	1239	0.25	1.15	0	10
Interest Class	1239	0.72	1.57	0	10
Parenting Attitude					
(0 Highest Expectation – 5 Lowest Expectation)					
Expecting all-round development	1114	1.43	1.06	0	5
Expecting score ranking above average	1081	1.57	1.08	0	5

Expecting entering a good university	1049	1.56	1.07	0	5
(0 Highly Agree – 5 Highly Disagree)					
Arranging children's education and life	1069	1.56	1.03	0	5
Disagree with natural growth	1091	3.06	1.12	0	5
Agree with intensive parenting	1086	1.83	1.09	0	5
Seeking help outside the family	1113	2.53	1.23	0	5
Anxiety Level					
(0 Not Anxious at all – 4 Very Anxious)					
Anxiety about Children's Education	1111	1.91	1.05	0	5
(0 Significantly reducing anxiety – 5 Significantly increasing anxiety)					
Policy Impact on Educational Anxiety	986	2	1.29	0	4
Attitude towards Policy Impact					
(0 Very Positive – 5 Very Negative)					
Overall attitude towards policy	953	1.88	1.17	0	5
(0 Significantly reducing – 5 Significantly increasing)					
Attitude towards policy impact on family educational burden	979	1.92	1.12	0	5
(0 Very Positive – 5 Very Negative)					
Attitude towards policy on the children's growth	948	1.94	1.23	0	5
(0 Significantly reducing – 5 Significantly increasing)					
Attitude towards policy impact on educational competition	912	2.05	1.26	0	5
(0 Not willing to at all – 5 Highly willing to)					
Willingness to go on seeking for discipline tutoring	835	1.5	1.1	0	4

Appendix 9. Goldthorpe's Social Class Scheme

	Original ninefold[a]	Sevenfold	Fivefold	Threefold
I	Higher-grade professionals, administrators and officials; managers in large industrial establishments; large proprietors	I + II 'service class'	I + II + III 'white-collar'	I + II + III + IVa + b 'nonmanual'
II	Lower-grade professionals, administrators and officials; higher-grade technicians; managers in small business and industrial establishments; supervisors of non-manual employees			
III	Routine non-manual employees in administration and commerce; sales personnel; other rank-and-file service workers	III		
IVa	Small proprietors; artisans, etc., with employees	IVa + b 'petty bourgeoise'	IVa + b 'petty bourgeoise'	
IVb	Small proprietors, artisans, etc., without employees			
IVc	Farmers and smallholders; self-employed fishermen	IVc	IVc + VIIb 'farm'	IVc + VIIb 'farm'
V/VI	Lower-grade technicians; supervisors of manual workers; skilled manual workers	V/VI	V/VI	V/VI + VIIa 'manual'
VIIa	Semi- and unskilled manual workers (not in agriculture)	VIIa	VIIa	
VIIb	Agricultural workers	VIIb		

Cited from Erikson, et al. (1983)

Appendix 10. Description of the New Classification of Parent's Occupation

	Old Variable	New Variable	N	Frequency	Percent	Valid Percent
	Public Sector	managers & professionals	270	26.8	26.8	26.8
	Managerial					
	Professional					
	Manufactural	manual workers	194	19.2	19.2	46.0
	Technical					
	Service	service workers & self-employed	375	37.2	37.2	83.2
	Self-employed					
	Farmer	farmers	170	16.8	16.8	100.0
	Unemployed					
	Others					
	Total		1009	100.0	100.0	

Appendix 11. Classification of City Tiers

Tier	City
1	Guangzhou
	Shenzhen
	Dongguan
2	Foshan
	Huizhou
	Zhuhai
	Zhongshan
3	Zhaoqing
	Jiangmen
	Shantou
	Zhanjiang
	Jieyang
	Qingyuan
	Meizhou
	Chaozhou
	Maoming
	Shaoguan
	Yangjiang
	Heyuan
	Shanwei
	Yunfu

Cited from China Business News (2019)

Appendix 12a. Codebook for Thematic Analysis

Codes	Description	Exemplars (Auto-Translated into English)
Theme 1: Context		
Afterschool Service	Description of the after-school services provided by the school, such as the length of time, the type of tutoring, etc.	“Teachers from our own school should participate in the study, as well as other teachers. That is to say, for example, go and badminton, we introduce some teachers from third-party institutions to participate in the study.”
Children’s Burden	The situation and change of the child's various burden (including academic burden).	“Our children do their homework until nine o 'clock every day, which takes about three hours.”
Children’s Patterns	A description of the child's interests, ideas, dreams, etc	“He wants to play online games every day, be an internet influencer and so on, and be a delivery brother.”
Time Schedule	A description of the child's time schedule.	“Sometimes at four o 'clock, sometimes at six o 'clock. If he finishes at four o 'clock, he will stay at school for a while to do his homework, and then he will be home and almost finished by seven o 'clock.”
Education System	Views and descriptions of today's Chinese education system.	“The admission of secondary schools in Guangzhou is by random lottery, but in fact there are a lot of secret test, early admission and other models, good schools are divided into several echelons.”
School Education	A description of the school education, such as environment, course design, etc.	“Because there is no need to look at the grades, our public teachers have no performance, anyway, I only take so many days of classes, my salary is the same, your students as long as nothing unexpected.”
World Environment	A view and description of today's macro/world environment.	“There are about three purposes. First, it is directly related to childbirth, reducing the pressure of childbirth, which is the most direct and fundamental reason. Second, it is related to the national development goal, which is to develop vocational education. The reason is that the new population is so small so far. If everyone gets a master's degree, China will face a huge shortage of low-end working population in the next 10 to 20 years”.

Theme 2: Private Tutoring		
Environment of Tutoring	A description of the current situation and changes in the tutoring environment.	“Because the double reduction just means that some very large institutions have been closed down, but in fact there are some small ones or other types of institutions, more or less there should be, but it's not likely to be as common as before.”
Reason for Tutoring	Reasons and considerations for participating in private tutoring.	“First, good habits; Second, you see, English is our main subject, Chinese is also a relatively difficult subject, he cannot understand, then his thinking cannot open, this is the second point.”
Values of Tutoring	Views on the effectiveness and value of after-school tutoring.	“The teacher of Xueersi really teaches very well, the child there he is happy to learn, at least in terms of absorption is particularly good, and a class of two and a half hours, he did not feel pain, I think he is happy.”
Frequency & Time	The frequency and time of participating in extracurricular tutoring.	“Subject classes should be once a week, about an hour and a half to two hours each time.”
Pre-Policy Tutoring	Participation in private tutoring before the implementation of the double reduction policy.	“Before the double reduction policy, there were still examinations and scores for small promotions. At that time, many parents would send their children to attend, and about half of them were sent to institutions.”
Post-Policy Tutoring	Participation in private tutoring after the implementation of the double reduction policy.	“Individual students may also exist, for some parents, after all, his job is busy, then he can't afford the time to accompany children, home only and the old man couldn't take education guide leads some of the tasks, so he could ask some of the individual teacher, and then go on their own a child to learn.”
Content of Tutoring	The form, content and schedule of the extracurricular tutoring.	“It seems that English is not only in the textbook, but also extracurricular. Chinese is also of this type.”
Educational Expenditure	A description of household educational consumption.	“Maybe 20,000 yuan for a child.”
Type of Participation	The specific types of education-related activities the child	“We will attend a lot of classes. There will be one English class and one math class a week. In addition, there will be some programming courses, such as go, basketball, table tennis,

	participates in.	art, piano and swimming.”
Cost & Prices	A description of costs and prices of educational products.	“Programming IT class, is a teacher private to do a class, it seems to be 300 yuan a class, a month about 1000 yuan.”
Discipline	A description of the specific subjects involved in the private tutoring.	“Both Chinese and English.”
Theme 3: Parenting		
Parenting Ideas	A description of a specific ideal parenting model for parents.	“For example, intelligent parents will not only pay attention to the cultivation of their children's character, but also guide their children to study seriously and fulfill their responsibilities as parents. Then, they will accompany their children more in this process and make a good life plan for their children.”
Family Parenting	A description of the goals, practices of family education (parenting behaviours), etc.	“Because the child's father has a master's degree, I am relatively less educated. Our whole family, since children in elementary school, junior high school, basically on business for a lot less time, family affairs to do it all by myself, as far as possible do children home when we are at home, in the morning when a child could see us, give the child a safer more perfect family atmosphere.”
Quality of Children	A ranking of expectations for the child's key qualities.	“I hope he can be independent, and a self-discipline, I ask for these two points, more than I do not ask him.”
Expectation	Descrption of parents’ expectations for the child's long-term development.	“My goal is the top 20%, the top fifth, now he sometimes reaches and sometimes does not reach, also did not ask for the first, second, top 20% I am very happy.”
Culture	Descriptions of cultural concepts related to education and family.	“Because the family tradition is like the Shandong people of scholarly family, the best occupation is to find a teacher or civil servant, that naturally attaches importance to the next generation of education, even if to sale the pot and iron to support children’s education.”
Values of Education	A description of the perceived value of education by parents.	“If people around him are very hardworking, he will be affected naturally. The topics they talk about are highly advanced and the discussion is positive. I think it will have a good

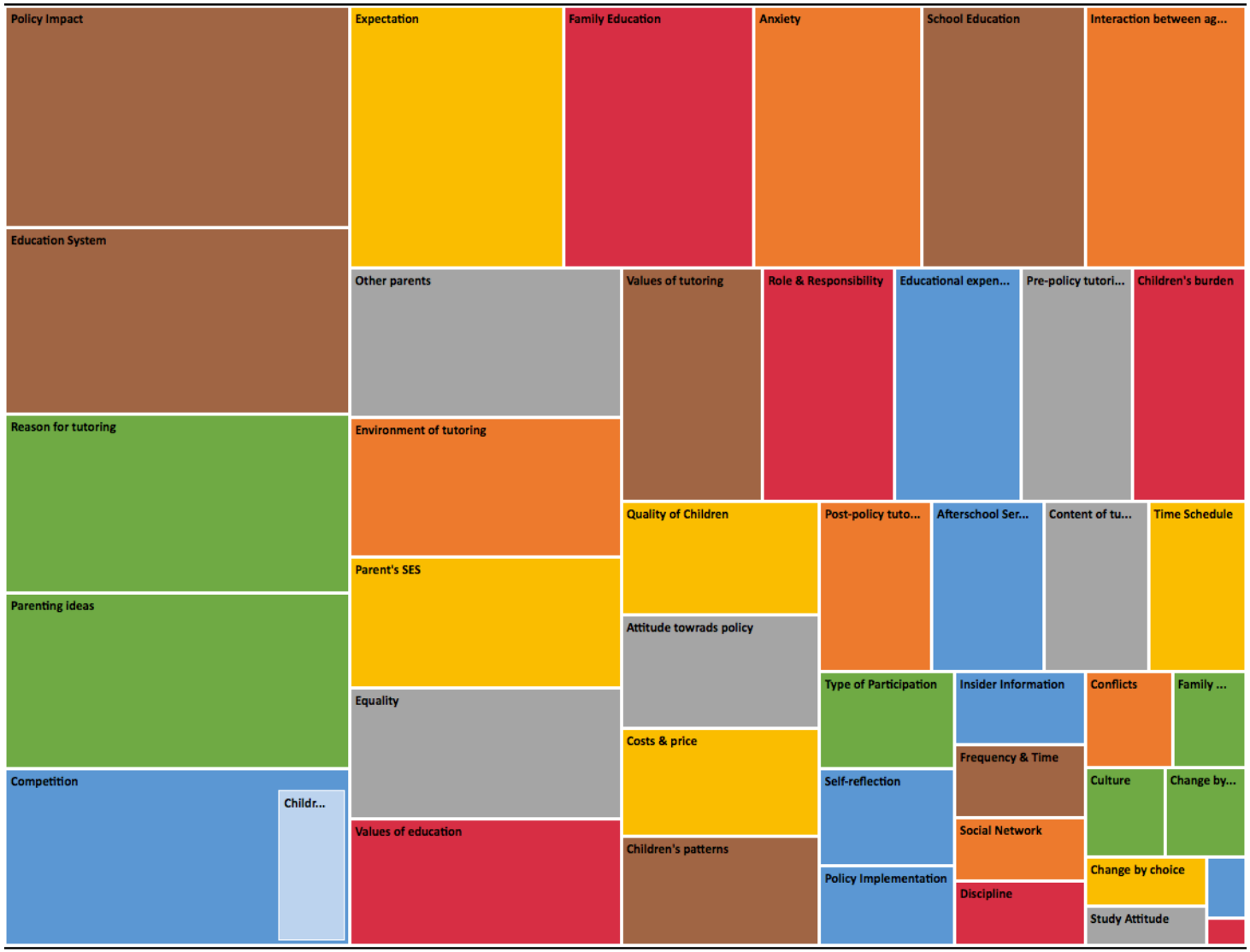
		influence on him. Therefore, a circle in junior high school is very important for him. I have always believed that the circle of people is very important. Since kindergarten, I have believed that people around me are very important to enter a circle.”
Role & Responsibility	Views on the responsibilities of different roles such as parents, teachers and schools for children's education.	“I think in family education, parents must bear 100% of the responsibility, a lot of children's study, life, I think or the education and guidance of parents brought it.”
Interaction between Agents	A description of the interaction between parents, teachers, institutions, schools, etc.	“I called the education bureau, and then the education bureau spoke to the school, and the school principal called me.”
Conflicts	Description of conflicts between the environment and own ideas, between different agents, etc.	“There are problems in communication between husband and wife, just like the example I just gave, I said that it is better for you to do this thing, but the father did not do this, the father did not do this, the child sees, the father did not do this, why should I do this.”
Other Parents	A description of the other parents' education, etc.	“In some parents’ idea, exam-oriented education has not changed before, is to Chinese, math, English these things, is to rely on these remedial courses. But some parents whose children didn't go to any cram school did just as well.”
Self-Reflection	Reflection on one's own ideas and actions, etc.	“A few years ago, a deviation, think it's allowed to proceed unchecked, but in this one or two years just detection, especially ShuangJian later discovered that in fact national ShuangJian, but you will find it there is a competition, is very fierce, you need to be cruel.”
Theme 4: Anxiety Levels		
Anxiety	Description of the extent and causes of anxiety as a parent.	“Anxiety, ah, you see he went to junior high school, has not that learning attitude, has learned not to go on.”
Family Burden	A description of the family's educational burden, etc.	“For example, three children in my family spend nearly 600 to 700 thousand yuan a year on it. You also have other family expenses and support for the elderly. Before the epidemic, you could bear it.”
Competition	A situation of competition	“Because you have the ability to go to college, you don't have the ability you have to go to

	between parents or students.	vocational school, junior college or something, right? That's the way it is. Isn't that the state's policy now?"
Equality	Views and attitudes towards educational equity in China.	"For example, like the secret test organized by others, it must be high, that we have not been exposed to these things, certainly cannot test, this is not a child's IQ problem, is not learned, how can you know, so these things are difficult for us to grasp."
Insider Information	Inside information from informal sources.	"These things have already formed a seller's market, is a private to do work, and they put this thing has been operating as a business, recruit members, collect fees, if you want to know a lot of information, will pay the membership fee, can you come in."
Theme 5: Policy Impact		
Policy Implementation	Performance of specific measures for policy implementation.	"Five regulating measures: are the management of mobile phone, reading, sleep, homework and so on."
Policy Impact	A description of the policy impact on individuals and environments, etc.	"After the double reduction, a variety of interest classes have replaced the original subject training class, which occupies some children's learning time to develop sports, art and some special skills, should be better."
Attitude towards Policy	Attitudes on policies related to the double reduction.	"We didn't have to worry about it anymore before the policy. Now it's more than double or triple, and I have to worry about all that stuff."
Change by Choice	After the double reduction policy, the initiative to change the arrangement of life after class.	"But I want him not to attend English tutoring, he is a little upset, he wants to learn, I said you have mastered almost, your English is far ahead in the class, you have mastered it, just follow the teacher to learn, there is no need to learn online."
Change by Necessity	After the double reduction policy, due to the environmental change, forced to make changes.	"It should be reduced by about half, because there is no line class this year, and swimming and basketball are often not available due to the impact of the epidemic."
Study Attitude	A description of the change in students' learning attitudes.	"They think, the teacher said can not go out to learn, then they don't have to learn, so even if I really want to ask him to learn, he is not willing to, has changed."
Parent's SES	A description of the parents' background, such as education,	"Some parents have found a good job in the past, have a good work unit, through their own personal efforts, perform well in the unit, then he will ask his children to do the same

	financial status, etc.	through their own efforts.”
Social Network	A description of the relationship between the impact of the double reduction policy and social networks and information flow.	“Mainly by WeChat group, some events parent group discussion is a little more, get more information, and then as a mother I found out more in private, who heard said, is to ask, then, privately and to add some parents WeChat, ask may ask some thing more, some parents were willing to share, He'll tell you more. That's it.”
Perception of Policy	A description of how parents and schools understand the purpose and proposition of the double reduction policy.	There are about three purposes. First, it is directly related to childbirth, reducing the pressure of childbirth, which is the most direct and fundamental reason. Second, it is related to the national development goal, which is to develop vocational education...”

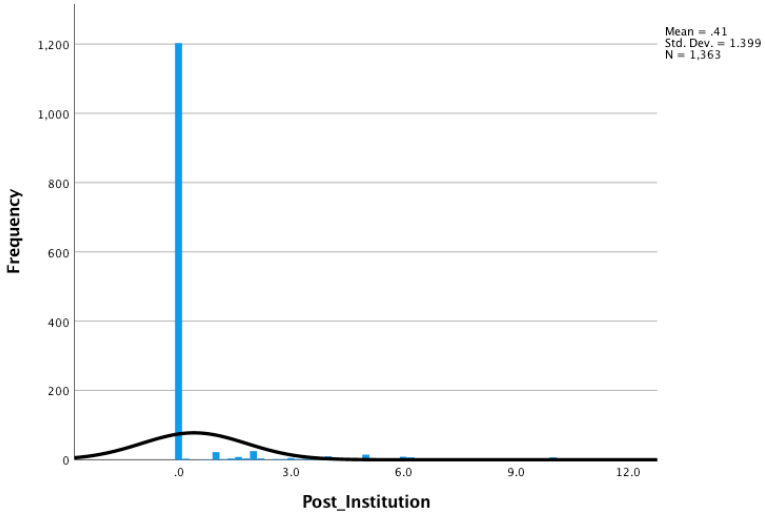
Appendix 12b. Description of Codes' Frequency

Codes	Number of coding references	Aggregate number of coding references	Number of items coded	Aggregate number of items coded
Codes\\Afterschool Service	16	16	8	8
Codes\\Anxiety	37	37	14	14
Codes\\Attitude towrads policy	19	19	7	7
Codes\\Change by choice	5	5	3	3
Codes\\Change by necessity	6	6	3	3
Codes\\Children's burden	22	22	12	12
Codes\\Children's patterns	18	18	12	12
Codes\\Competition	41	51	13	16
Codes\\Competition\Children's per...	10	10	8	8
Codes\\Conflicts	7	7	3	3
Codes\\Content of tutoring	15	15	7	7
Codes\\Costs & price	18	18	10	10
Codes\\Culture	6	6	5	5
Codes\\Discipline	7	7	7	7
Codes\\Education System	54	54	15	15
Codes\\Educational expenditure	25	25	11	11
Codes\\Environment of tutoring	32	32	12	12
Codes\\Equality	30	30	13	13
Codes\\Expectation	47	47	14	14
Codes\\Family Burden	6	6	5	5
Codes\\Family Education	42	42	13	13
Codes\\Frequency & Time	8	8	5	5
Codes\\Insider Information	8	8	4	4
Codes\\Interaction between agents	35	35	11	11
Codes\\Other parents	34	34	14	14
Codes\\Parent's SES	30	30	10	10
Codes\\Parenting ideas	51	51	14	14
Codes\\Perception of Policy	2	2	2	2
Codes\\Policy Impact	64	64	14	14
Codes\\Policy Implementation	9	9	3	3
Codes\\Post-policy tutoring	16	16	13	13
Codes\\Pre-policy tutoring	22	22	12	12
Codes\\Quality of Children	19	19	10	10
Codes\\Reason for tutoring	52	52	14	14
Codes\\Role & Responsibility	26	26	11	11
Codes\\School Education	36	36	11	11
Codes\\Self-reflection	11	11	7	7
Codes\\Social Network	7	7	3	3
Codes\\Study Attitude	4	4	1	1
Codes\\Time Schedule	14	14	9	9
Codes\\Type of Participation	11	11	8	8
Codes\\Values of education	29	29	11	11
Codes\\Values of tutoring	28	28	8	8
Codes\\World Environment	2	2	2	2


Policy Impact
Expectation
Family Education
Anxiety
School Education
Interaction between ag...
Education System
Other parents
Values of tutoring
Role & Responsibility
Educational expen...
Pre-policy tutori...
Children's burden
Reason for tutoring
Environment of tutoring
Quality of Children
Post-policy tuto...
Afterschool Ser...
Content of tu...
Time Schedule
Parenting ideas
Parent's SES
Attitude towrads policy
Type of Participation
Insider Information
Conflicts
Family ...
Equality
Costs & price
Frequency & Time
Culture
Change by...
Competition
Childr...
Values of education
Children's patterns
Self-reflection
Social Network
Change by choice
Policy Implementation
Discipline
Study Attitude

Appendix 13a. Parametric Test Results for Regression Analysis: Histograms for post-policy time spent on three kinds of private tutoring

Institutional Tutoring



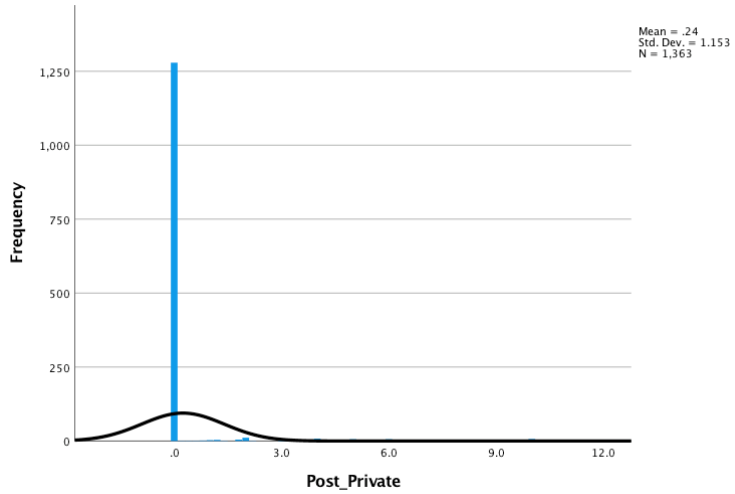
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Post_Institution	.499	1363	.000	.335	1363	<.001

a. Lilliefors Significance Correction

Result: does not pass the assumptions for linear regression.

Individual Tutoring



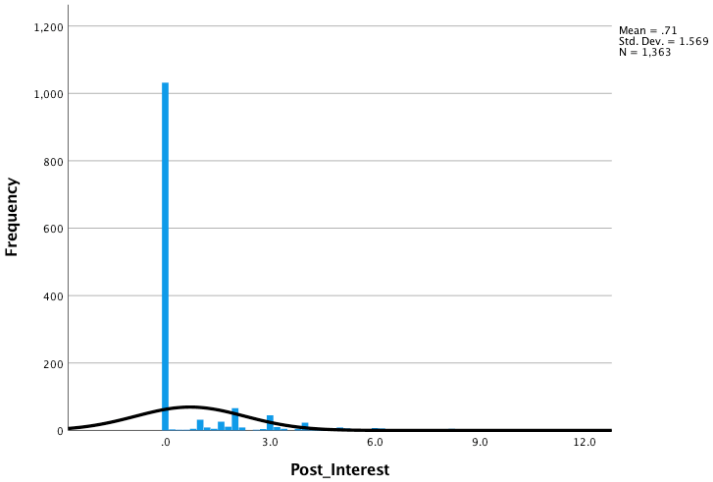
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Post_Private	.522	1363	.000	.221	1363	<.001

a. Lilliefors Significance Correction

Result: does not pass the assumptions for linear regression.

Interest Classes



Tests of Normality

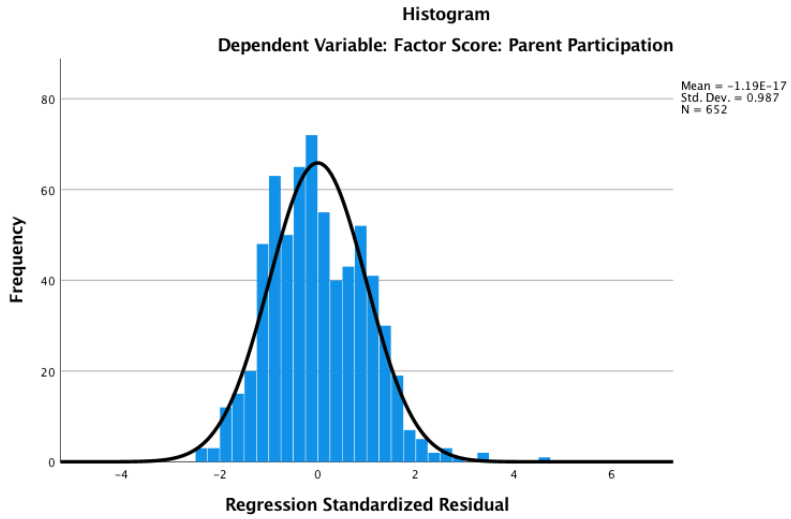
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Post_Interest	.433	1363	.000	.530	1363	<.001

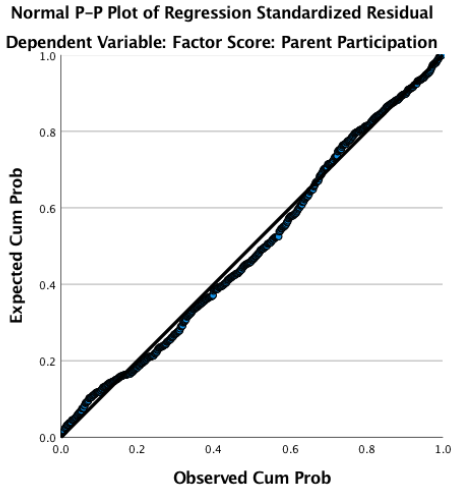
a. Lilliefors Significance Correction

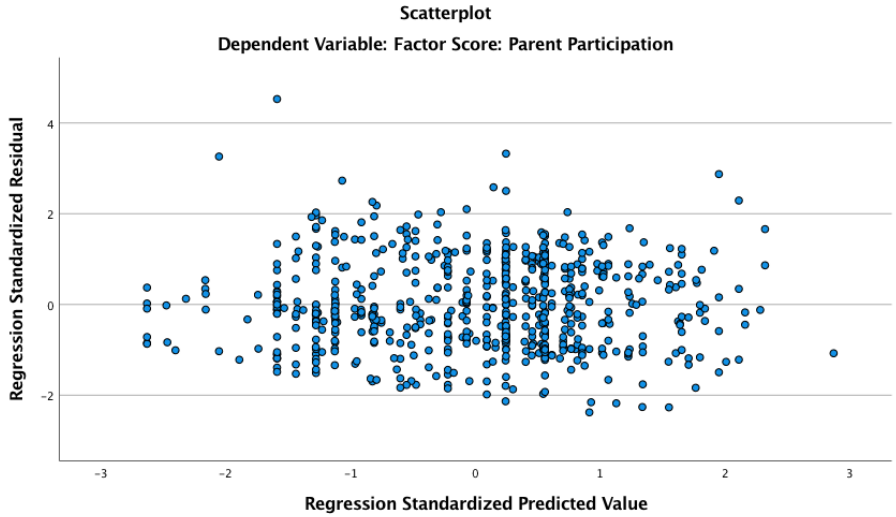
Result: does not pass the assumptions for linear regression.

Appendix 13b. Parametric Test Results for Regression Analysis: Model 4~7

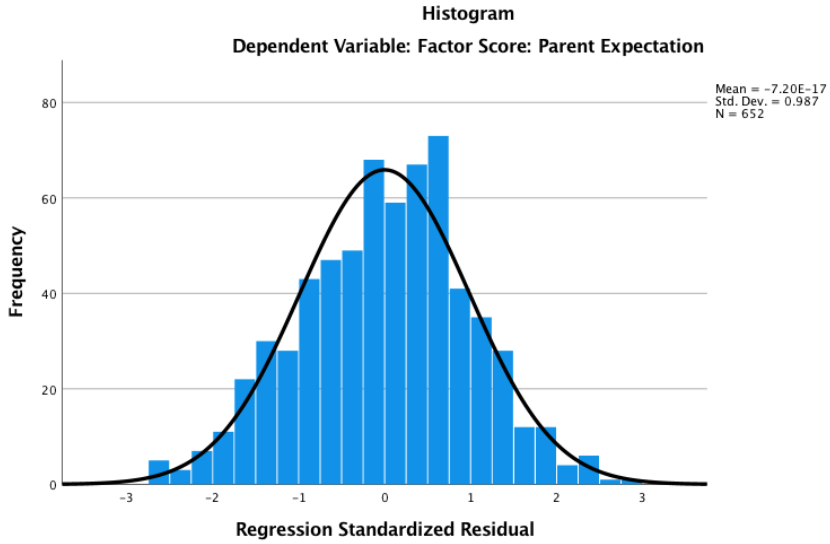
Model 4: Educational Expectation scores

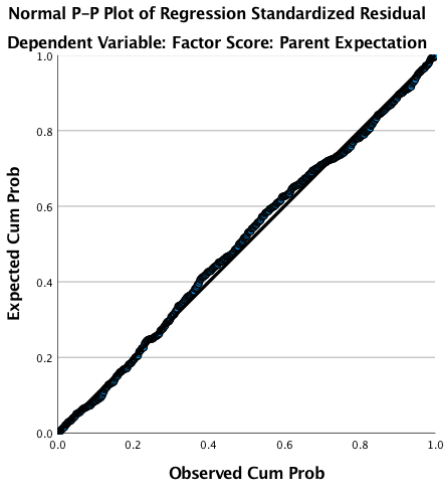


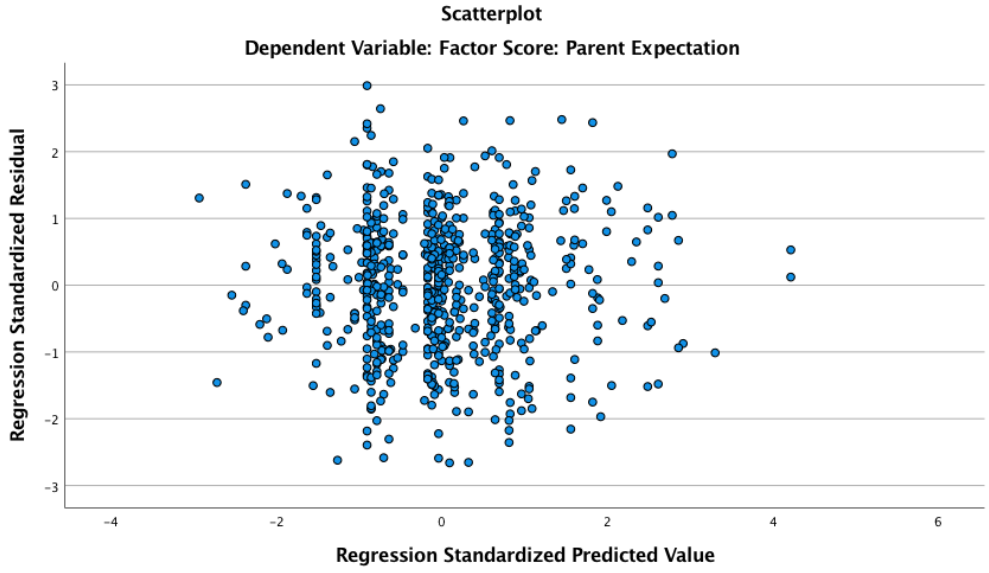




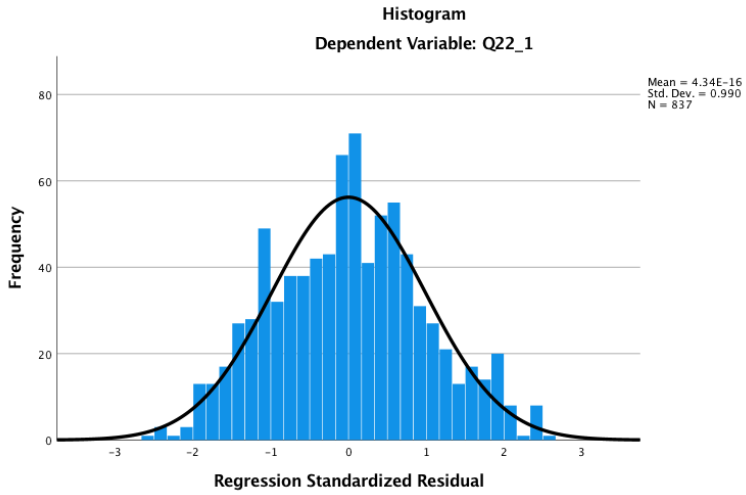
Model 5: Intensive Parenting scores

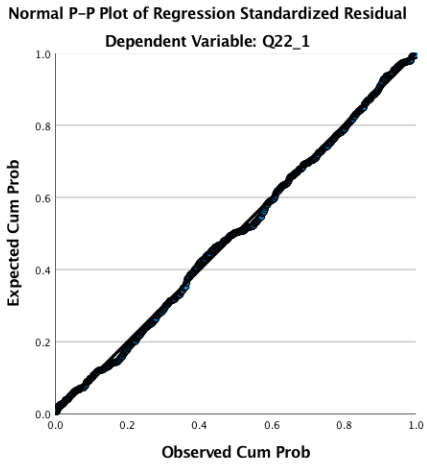


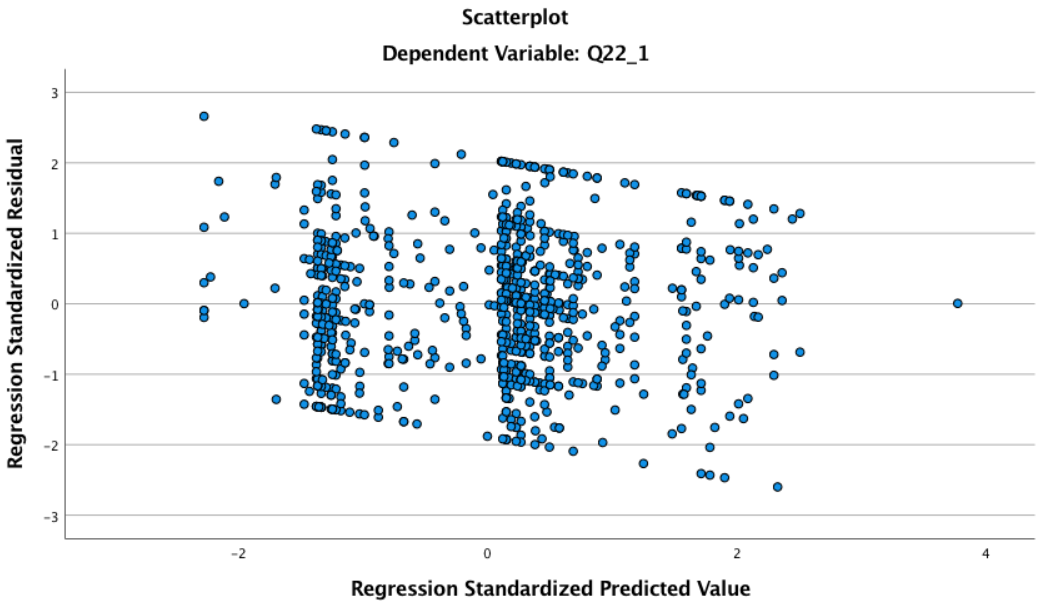




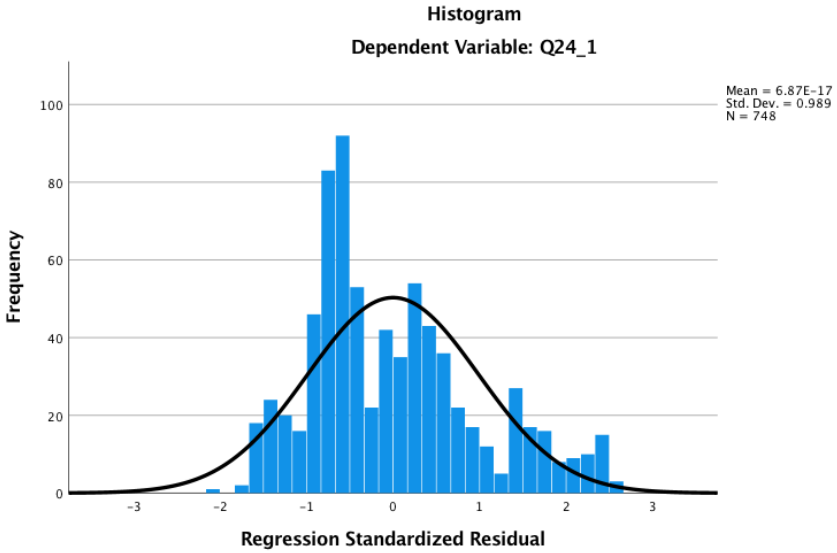
Model 6: Anxiety Level scores

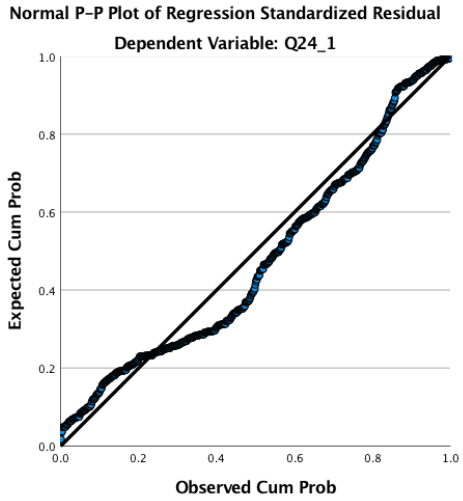


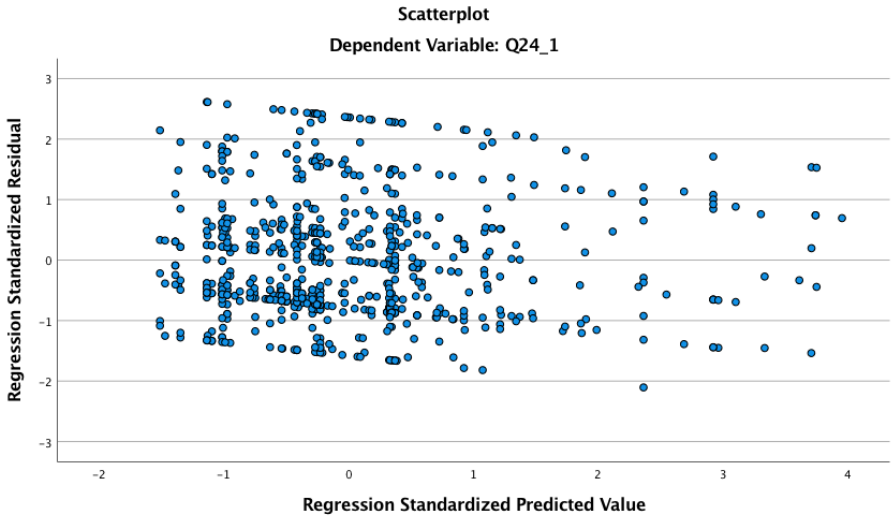




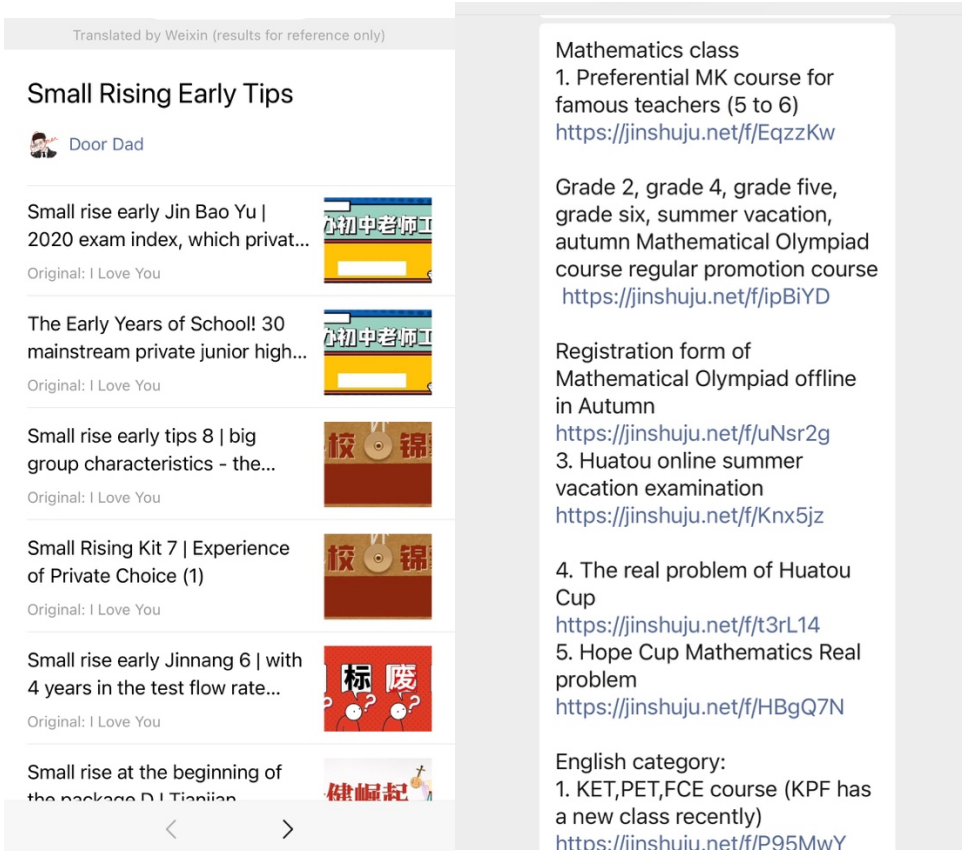
Model 7: Anxiety Change scores







Appendix 14. Screenshots of some Public Subscription Accounts' Articles (Auto-Translated)



Translated by Weixin (results for reference only)

Small Rising Early Tips

Door Dad

Small rise early Jin Bao Yu | 2020 exam index, which privat...
Original: I Love You

The Early Years of School! 30 mainstream private junior high...
Original: I Love You

Small rise early tips 8 | big group characteristics - the...
Original: I Love You

Small Rising Kit 7 | Experience of Private Choice (1)
Original: I Love You

Small rise early Jinnang 6 | with 4 years in the test flow rate...
Original: I Love You

Small rise at the beginning of

Mathematics class
1. Preferential MK course for famous teachers (5 to 6)
https://jinshuju.net/f/EqzzKw

Grade 2, grade 4, grade five, grade six, summer vacation, autumn Mathematical Olympiad course regular promotion course
https://jinshuju.net/f/ipBiYD

Registration form of Mathematical Olympiad offline in Autumn
https://jinshuju.net/f/uNsr2g
3. Huatou online summer vacation examination
https://jinshuju.net/f/Knx5jz

4. The real problem of Huatou Cup
https://jinshuju.net/f/t3rL14
5. Hope Cup Mathematics Real problem
https://jinshuju.net/f/HBgQ7N

English category:
1. KET,PET,FCE course (KPF has a new class recently)

Translated by Weixin (results for reference only)

1, subject specialty students source selection class

Mathematics competition or other science and technology and other award-winning students, in the small rise at the beginning of a few big rich, first-line public school characteristic classes to choose degrees of freedom is relatively large.

In recent years, the folk groped and summed up a conclusion that the BS first or second prize + P with high gold content is the basic configuration of the rich and powerful students. The goal of this class is to cultivate students for high school competition students / key classes. This type of class2022The average score of the middle school examination is about 740-750.

Part of the public school line characteristics class	Projected	Part of the public school line characteristics class / school	Projected
HF	120	JGF	2 Orban

Translated by Weixin (results for reference only)

2, have the strength to choose the district public weight, civilian school characteristics class

After the New Deal in 2020, most of the students in popular private schools have been enrolled, and everyone's goal can only be changed from choosing a school to choosing a class. The influence of the transfer of the public to the public, the characteristic classes of public schools in various districts are also increasingly concerned by parents.

To enter the high-quality characteristic classes of citizen schools in various districts, there are generally three ways:

1, resume prominent: such as high gold content of academic activities, district level above the "Little Red" honor, class five under six on 290 or even 295 points above are very competitive resume.

Some schools have open registration activities, strive for school screening activities, and enter

Appendix 15. Full Results of Models 1, 2 & 3

Model 1: Change in Institutional Subject Tutoring (N=1009)

Predictor's Unique Contributions in the model

Predictor	**X^2**	**df**	**P**
City Tier	1.68	4	0.79
Pre-policy Participation in Institutional Subject Tutoring	445.00	2	<0.001 ***
Parent's Education Attainment	10.26	6	0.04 *
Parent's Occupation	2.37	4	0.88
Residential Status	2.28	2	0.32
Grade Ranks	1.09	4	0.90

Parameter Estimates Contrasting 'No Change' versus Each of the Other Groups

Predictor	**"No Change"**	**B**	**OR**	**P**
Intercept	Increase	-3.87		***
	Decrease	-21.29		***
Pre-policy Participation (Reference Group = Did not participate before Sept 2021)				
Participated before Sept 2021	Increase	3.03	20.79	***
	Decrease	22.70	7224685404	***
City Tier (Reference Group = tier 3)				
Tier 1	Increase	0.14	1.15	
	Decrease	-0.43	0.65	
Tier 2	Increase	0.20	1.23	
	Decrease	-0.37	0.69	
Parent's Education Attainment (Reference Group = Tertiary)				
Less than Primary	Increase	1.03	2.79	*
	Decrease	-1.38	0.25	
Secondary	Increase	0.25	1.28	
	Decrease	-0.30	0.74	
Parent's Occupation (Reference Group = Farmers)				
Managers & Professionals	Increase	0.61	1.84	
	Decrease	0.07	1.08	
Manual Workers	Increase	-0.03	0.97	
	Decrease	-0.40	0.67	
Service Workers & Self-employed	Increase	0.39	1.47	
	Decrease	-0.19	0.83	
Residential Status (Reference Group = Local)				
Non-local	Increase	0.19	1.21	
	Decrease	0.81	2.24	
Grade Ranks (Reference Group =Midstream)				
Upstream	Increase	-0.15	0.86	
	Decrease	-0.36	0.70	
Downstream	Increase	0.07	1.07	
	Decrease	-0.36	0.70	

Note: Model fitting information $X^2 = 483.16$, Nagelkerke R^2 =0.589, p < 0.001 ***. *p < .05 ** p<0.01 *** p<0.001.

Model 2: Change in Private Subject Tutoring (N=1009)

Predictor's Unique Contributions in the model

Predictor	**X^2**	**df**	**P**
City Tier	3.06	4	0.55
Pre-policy Participation in Private Subject Tutoring	314.90	2	<0.001 ***
Parent's Education Attainment	5.96	6	0.20
Parent's Occupation	4.03	4	0.67
Residential Status	1.46	2	0.48
Grade Ranks	0.73	4	0.95

Parameter Estimates Contrasting 'No Change' versus Each of the Other Groups

Predictor	**"No Change" vs.**	**B**	**OR**	**P**
Intercept	Increase	-3.05		***
	Decrease	-21.84		***
Pre-policy Participation (Reference Group = Did not participate before Sept 2021)				
Participated before Sept 2021	Increase	3.15	23.40	***
	Decrease	24.49	43346897686	***
City Tier (Reference Group = tier 3)				
Tier 1	Increase	-0.32	0.73	
	Decrease	0.18	1.20	
Tier 2	Increase	0.94	2.56	
	Decrease	0.22	1.24	
Parent's Education Attainment (Reference Group = Tertiary)				
Less than Primary	Increase	-0.13	0.88	
	Decrease	0.62	1.87	
Secondary	Increase	-0.57	0.56	
	Decrease	-1.51	0.22	
Parent's Occupation (Reference Group = Farmers)				
Managers & Professionals	Increase	-0.40	0.67	
	Decrease	-1.88	0.15	
Manual Workers	Increase	0.18	1.20	
	Decrease	-0.65	0.52	
Service Workers & Self-employed	Increase	-0.44	0.65	
	Decrease	-0.88	0.42	
Residential Status (Reference Group = Local)				
Non-local	Increase	-0.12	0.89	
	Decrease	0.77	2.15	
Grade Ranks (Reference Group =Midstream)				
Upstream	Increase	0.25	1.28	
	Decrease	0.00	1.00	
Downstream	Increase	0.04	1.05	
	Decrease	-0.46	0.63	

Note: Model fitting information $X^2 = 336.67$, Nagelkerke $R^2 = 0.563$, $p < 0.001$ ***. *p < .05 ** p<0.01 *** p<0.001.

Model 3: Change in Interest Class (N=1009)

Predictor's Unique Contributions in the model

Predictor	**X^2**	**df**	**P**
City Tier	5.08	4	0.28
Pre-policy Participation in Interest Class	433.13	2	<0.001 ***
Parent's Education Attainment	5.79	6	0.60
Parent's Occupation	4.55	4	0.22
Residential Status	2.21	2	0.33
Grade Ranks	3.52	4	0.48

Parameter Estimates Contrasting 'No Change' versus Each of the Other Groups

Predictor	**"No Change"**	**B**	**OR**	**P**
Intercept	Increase	-2.00		***
	Decrease	-21.52		***
Pre-policy Participation (Reference Group = Did not participate before Sept 2021)				
Participated before Sept 2021	Increase	1.21	3.34	***
	Decrease	21.66	2561846682	***
City Tier (Reference Group = tier 3)				
Tier 1	Increase	0.23	1.26	
	Decrease	-0.25	0.78	
Tier 2	Increase	0.88	2.41	*
	Decrease	0.28	1.33	
Parent's Education Attainment (Reference Group = Tertiary)				
Less than Primary	Increase	-0.56	0.57	
	Decrease	0.94	2.55	
Secondary	Increase	-0.48	0.62	
	Decrease	-0.38	0.69	
Parent's Occupation (Reference Group = Farmers)				
Managers & Professionals	Increase	0.27	1.31	
	Decrease	0.62	1.86	
Manual Workers	Increase	0.12	1.13	
	Decrease	0.75	2.12	
Service & Self-employed	Increase	-0.02	0.98	
	Decrease	0.89	2.44	
Residential Status (Reference Group = Local)				
Non-local	Increase	-0.32	0.73	
	Decrease	0.23	1.25	
Grade Ranks (Reference Group =Midstream)				
Upstream	Increase	0.32	1.38	
	Decrease	-0.19	0.83	
Downstream	Increase	0.05	1.06	
	Decrease	-0.33	0.72	

Note: Model fitting information $X^2 = 546.532$, Nagelkerke R^2 =0.537, p < 0.001 ***. *p < .05 ** p<0.01 *** p<0.001.