

Equalising Schooling, Unequalising Private Supplementary Tutoring: Access and Tracking through Shadow Education in Shanghai, China

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The global expansion of mass schooling has greatly increased opportunities for low-income families, and governments have devoted much effort to equalising access and quality in education systems. Alongside regular schooling, the so-called shadow education system of private supplementary tutoring has grown rapidly across the world. The fact that rich families can purchase more and better quality shadow education undermines the achievements of increased equality of opportunities in formal schooling.

Drawing on a mixed-methods study in Shanghai, China, the article shows how shadow education has offset school equalisation policies through differentiation of access and through sorting mechanisms. Shadow education occupies a space beyond strict government control in which privileged families and elite schools ignore and mediate the equalisation policies, seeking competitive advantages. Uneven access to shadow education and tracking within it shape, maintain and exacerbate inequitable schooling experiences at individual and institutional levels.

Keywords: private supplementary tutoring; shadow education; inequalities; tracking; China

Introduction

Families across the globe increasingly find it necessary to invest in private tutoring to supplement their children's schooling experiences. Scholars have begun to recognise the role of such tutoring in learning outcomes, school operations, students' lives, and social stratification (e.g., Roesgaard, 2006; Liu, 2012; Aurini, Davies & Dierkes, 2013; Bray & Kobakhidze, 2015). Private tutoring is widely known as shadow education because much of its curriculum mimics that in schooling, and changes according to changes in the schools (Bray, 1999; 2009). In some cases, the shadow goes beyond the official curriculum and affects the body that it imitates with a backwash on schooling.

Much research on shadow education has focused on educational inequalities. Discussions revolve around socio-economic patterns of access to supplementary tutoring, noting that pupils from well-endowed

families and whose parents hold higher educational qualifications tend to receive more and better tutoring (Silova et al., 2006; Xue & Ding, 2009; Pallegedara, 2012; Bray et al., 2013). Some researchers have looked further into government responses, and a few studies have examined tutoring processes and patterns of consumption. For instance, a qualitative study in Egypt documented the capacity of better-off students to access private lessons and ‘famous teachers’ (Hartmann, 2013); and an Eastern European regional study similarly noted strategic use of tutoring by privileged families (Jokić, 2013). However, many of the subtle procedures that tutoring uses to define opportunities to learn both within and outside schooling remain underexplored.

Another body of literature in the domain of inequalities focuses on sorting and selection within schools through tracking (e.g., Douglas, 1964; Rosenbaum, 1976; Gamoran & Mare, 1989; Oakes, 2005; Burris, 2014). The literature has shown that tracking may enact class discrimination, and in particular may limit the opportunities of students in disadvantaged groups.

The present paper shows that tracking happens not only within schools but also within shadow education. Focusing specifically on Shanghai, China, it brings together the two bodies of research in the context of school equalisation policies. The patterns identified have considerable relevance not only in China but also in other parts of the world. The authors commenced by investigating patterns of access to tutoring and practices of tracking in shadow education. They then asked how access to tutoring and tracking within it shaped socialisation and selection within schools; and thirdly, they investigated the implications of the patterns for equalisation of educational opportunities. The paper focuses on fee-paying tutoring received by primary and secondary students in academic subjects on a one-to-one basis, in small groups, and in larger classes.

Conceptual framework

Studies of relationships between shadow education and schooling have demonstrated that goals of equal opportunity through expansion of schooling may be subverted by disparities in access to different types and qualities of private tutoring (e.g. Dawson, 2010; Bray & Kwo, 2013). For example, government initiatives in Japan and South Korea to eliminate entrance examinations to secondary schooling, and to reduce disparities between both primary and secondary schools, exacerbated anxieties and insecurities in families striving to maintain their children’s competitive advantages. Shadow education expanded in response to perceptions that regular schooling was inadequate to guarantee success in high-stakes college entrance examinations (Byun, 2010; Lee et al., 2010; Sato, 2012; Dierkes, 2013). These experiences are a reminder that efforts to reduce educational inequalities should be informed by research on shadow education.

Within school systems, student opportunities are greatly influenced by tracking, which may be defined as ‘the process whereby students are divided into categories so that they can be assigned in groups to various kinds of classes’ (Oakes, 2005: 3). Students are commonly placed in curriculum groups on the basis of their educational and occupational plans, such as ‘vocational’ or ‘academic’. Ability grouping, by contrast, mainly classifies students on academic achievements. The two types of grouping are related, and both may

obstruct broader policies to equalise opportunities (Rosenbaum, 1976; Oakes, 2005; Kelly, 2007). Disparities between tracks within schools and variations in tracking practices between schools yield ‘multiplying inequalities’ (Oakes et al., 1990) in learning opportunities and instructional strategies (Gamoran et al., 1995; Burris, 2014). In the USA, for example, Oakes (2005: 226-229) showed that low-track curricula emphasised basic facts and skills, while high-track curricula emphasised concepts and problem-solving. Further, low-track teachers spent more time on discipline and seatwork, while high-track teachers focused more on instruction and interactions. Also, low-track teachers generally had less experience and fewer qualifications.

The criteria used for tracking have also been scrutinised. Although the stage at which students leave school is commonly viewed as a matter for family and individual choice, aspirations are usually influenced by family cultural capital (Bourdieu, 1973). Even if lower-tracked students hold high academic aspirations, their chances to fulfil these aspirations are limited by the orientations of the curricula and by social expectations. Although scores on standardised achievement tests are commonly perceived as accurate reflections of students’ abilities, they may reflect biases in racial, social and economic status. Mercer (1992) noted that intelligence and achievement tests were devised by members of the dominant social group and biased against poor students, racial minorities and linguistic minorities.

The labels that tracking attaches to students may also generate social expectations from relatives, peers and teachers, and contribute to self-fulfilling prophecies (Oakes, 2005; Rist, 2007; Burris, 2014). High-track students are likely to be described as ‘bright’, ‘quick learners’, ‘diligent’, and/or ‘successful’, while low-track students are commonly described as ‘dumb’, ‘slow learners’, ‘lazy’ and/or ‘failures’. Labels are transformed into unequal treatment by those using the terms, and internalised by the students.

Studies of schools undergoing detracking have found that parents of high achieving students resisted the efforts to offer a standard curriculum to all students. In the USA, Wells and Oakes (1996) described these parents as ‘White and/or wealthy, well-educated, and politically powerful’ (p.138). Underlying such resistance were two structural barriers to detracking: the parents’ demand for differentiation, and stratified higher education. Tracking and stratification at the secondary level were driven by influential middle-class parents desiring their children to enter elite universities.

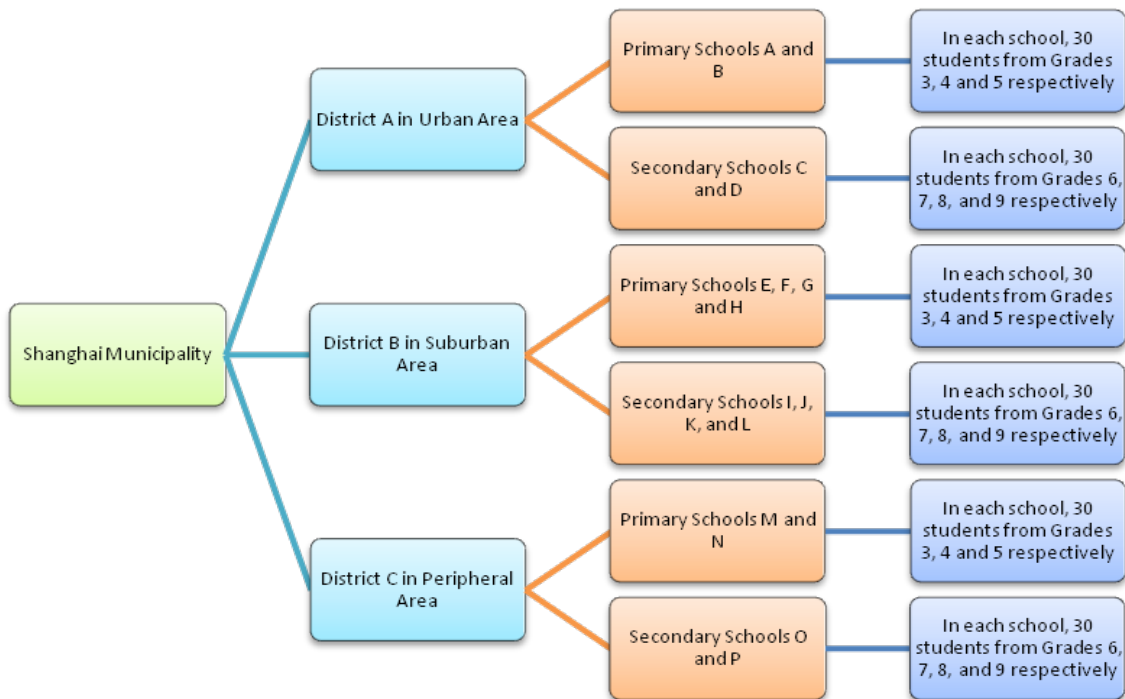
The two themes identified above are largely applicable to China, except that most Chinese parents find themselves politically powerless to influence the official discourse and district/school practices towards equalised schooling, including detracking. Prosperous parents seek alternatives in shadow education empowered by a marketplace with little government regulation. The strategies are employed not only by middle-class parents but also by high-status schools. Expanded access and detracking in the mainstream are subverted by restricted access and ‘retracking’ in the shadow education system.

The data

This paper draws on a study that sought to harness the strengths of both quantitative and qualitative approaches (Johnson & Christensen, 2012). The researchers collected survey responses from students in Grades 3-9, and interviewed students, teachers and parents.

The survey employed a three-stage stratified sample. First, Shanghai was divided into urban, suburban and peripheral areas (Figure 1), from each of which one district was randomly selected. Then in District A and District C, two primary schools and two lower secondary schools were randomly selected. In District B four primary and four lower secondary schools were selected because the schools and students were significantly more numerous than in the other two Districts. In 2014, 908,565 students were enrolled in Grades 3-9 (Shanghai Municipal Bureau of Statistics [SMBS], 2015), which for a random sample would have required a minimum of 651 students with a 0.05 margin of error and 99% confidence level. To account for the design effect of multi-stage sampling (Snijders & Bosker, 1999: 22-24), in line with accepted practice the sample size was more than doubled to secure the representativeness of the sample. Within each target grade of each sampled school, 30 students were randomly selected. This procedure thus delivered a total sample of 1,680 students in eight primary schools and eight lower secondary schools in three districts. Within the sample, 1,531 students provided usable responses.

Figure 1. Three-stage stratified sampling of survey participants



The survey was conducted on-line using a questionnaire adapted from one used elsewhere for a similar purpose (Liu, 2015) and then piloted in two local schools. Most students completed the survey on their school premises, while others did so at home following briefing by their teachers. The teachers were asked to explain clearly and if necessary repeatedly until all the respondents understood the intended definition of tutoring in the study. In addition, the questionnaire itself began with the definition of tutoring which the respondents were asked to read before answering the questions. The definition also appeared on the sheet provided to each student with log-on information for the survey.

Initial analysis with descriptive statistics was followed by binary logistic regression to identify socioeconomic patterns of access to tutoring using student background information. The regression focused on data from students in Grades 6-9, since primary students may not provide reliable data on household incomes and parents' education. Table 1 summarises the variables, measures and codes. When parents had different levels of education, the level of the parent with more education was used. Concerning the specifics of Grades 6-9 (in contrast to the larger sample of Grades 3-9), in 2014, 426,789 students were enrolled (SMBS, 2015), which for a random sample would have required a minimum of 377 students with a 0.05 margin of error and 95% confidence level. The actual sample size was 892, which is 2.37 times the minimum.

Table 1. Variables used for binary logistic regression

Variable	Measures and codes
Dependent variable	
<i>Participation in tutoring</i>	Yes = 1; No = 0.
Independent Variables	
<i>Residential status determined by place of origin (hukou)</i>	Two categories: Shanghai = 0; Other regions in Mainland China = 1.
<i>District</i>	Three categories: Urban core = 1; Suburban = 2; Peripheral = 3.
<i>Highest level of parental education</i>	Upper secondary or below = 1; Associate or undergraduate = 2; Postgraduate or above = 3.
<i>Family monthly average income</i>	<=5,000 yuan = 1; 5,001–15,000 yuan = 2; >15,000 yuan = 3.
<i>Family size</i>	Two categories: Single child = 0; With siblings = 1.
<i>Gender</i>	Two categories: Male = 0; Female = 1.
<i>Private cars</i>	Two categories: No private car = 0; With private car(s) = 1.
<i>Self-assessed Academic Achievement</i>	Excellent = 1; Upper above average = 2; Lower above average = 3; Average = 4; Poor = 5.

For the interviewees, the researchers used a combination of purposeful and opportunistic sampling. Using maximal variation sampling (Creswell, 2012: 208) to identify the institutions, 30 schools were invited to participate among which 12 accepted. Among them were three ordinary primary schools (all public), two elite primary schools (one public and one private), two ordinary lower secondary schools (both public), three elite lower secondary schools (one public and two private), and two elite upper secondary schools (both

public). Among the 12 schools in which interviewees agreed to participate, three were among the 16 schools from which survey data were collected. The researchers did not consider it essential to have a direct match in the schools for survey and interview data, since the main purpose of the interviews was to elaborate in a qualitative way on the patterns revealed by the surveys.

The teachers and students for interview were chosen with help from the school authorities according to availability. The researchers sought balances between females and males, and between students without and with tutoring. Tutors, parents and a government official were recruited through opportunistic sampling (Patton, 2002: 244). Most interviews lasted between 40-60 minutes, and were conducted in school and tutorial centre classrooms. Interviews focused on the reasons for tutoring, forms of tutoring, relationships between tutoring and schooling, and impact on parenting and the larger society. Data were collected from 43 students, 31 teachers, five principals, seven parents, two tutors, the manager of a tutorial centre, and a government official. Following the guidelines of Gibbs (2007), transcripts were analysed with thematic coding.

The research site

Shanghai is widely recognised as China's international financial, economic and trading centre. Within Shanghai's population of 24.3 million, 14.4 million are classified as permanent residents and 9.9 million are migrant workers and others without registered local (*hukou*) residence (SMBS, 2015). In 2014, Shanghai's per capita Gross Domestic Product was US\$15,851 (SMBS, 2015), indicating that households had considerable wealth for investment in education and other domains. By contrast, the figure for China as a whole was US\$7,591 (China, 2015). Shanghai has a substantial middle class exposed to neoliberal forces (Ding, 2011).

Shanghai has a reputation for piloting educational reforms that have later become national policies. The municipality is also known for its scores in the Programme for International Student Assessment (PISA) sponsored by the Organisation for Economic Co-operation and Development (OECD) (Sellar & Lingard, 2013; Tan 2013; Zhang et al., 2011), which have contributed to lessons for other provinces. Yet some cultural traditions remain strong despite wider changes (Cheng, 2010; Zhang & Kong, 2012). Families emphasise the possibility of success through diligence and of social mobility through education; and children's academic achievements bring prestige to entire families (Chan, 2007). The one-child policy has intensified pressures (Liu, 2016).

Expansion of higher education in China has increased opportunities for the general public but has resulted in a highly stratified system with a few top universities and overall inflation of educational qualifications. The high-stakes National College Entrance Examination (*Gaokao*) has become a battlefield in which middle-class families compete for access to top universities. Competition and stress at this level have a backwash on the Grade 9 examination (*Zhongkao*) which governs entry to elite upper secondary schools; and in turn this examination has a backwash on admissions systems for lower secondary and even primary schools.

Although the authorities value tutoring as an ingredient of human capital and economic competitiveness, they worry about the study load on students and about social inequalities (Cheng, 2010;

China, 2010; Zhang, 2014). Families also feel stressed by competition, and face dilemmas in which both joining and avoiding shadow education are problematic (Yu & Ding, 2011). School personnel are similarly ambivalent, desiring whole-person development but also feeling pressurised by performativity in the context of competition and marketisation of education.

Equalising schooling in Shanghai

Shanghai's school system has nine years of compulsory education (five years of primary and four years of lower secondary), and, in the academic track, three years of upper secondary schooling. Shanghai was the first city in China to achieve universal primary and secondary schooling (SEC, 2012), and has also greatly expanded higher education. Whereas 67.4% of Grade 12 graduates entered higher education in 2000, 89.0% did so in 2014 (China, 2015). Increased educational opportunities have intensified competition for high-status institutions which are gateways to elite occupations and further life chances.

During the 1950s the Shanghai authorities, in line with national policy, designated some institutions as key schools (Yang, 2006; Wu, 2014). The schools, which were models for wider improvement, received favourable government funding and recruited the best teachers and students. Within the schools, students were tracked into key and ordinary classes. As might be expected, students in key schools gained higher test scores than counterparts in ordinary schools, and further disparities were evident between rural and urban areas (Xie & Tan, 1997: 91-100). Because the key schools privileged urban and elite families, during the 1990s the label was officially removed at the level of compulsory education though it remains in common parlance and perception. At the secondary level, key schools have been relabelled as 'experimental demonstration' schools. Leading the cluster of upper secondary key schools are six demonstration schools run by the municipal government (SEC, 2013).

The government has sought to reduce gaps between schools and to equalise educational opportunities, particularly focusing on the nine years of compulsory education. In 1999 the municipal authorities initiated a reform to standardise facilities of primary and secondary schools, and in 2004 they increased the required standards for all schools (Gu, 2011). The measure significantly improved the facilities of ordinary schools in poor districts. Recognising the wide disparities in per-student spending across districts, additional finance was provided to needy areas (Zhang & Kong, 2012: 154-156). In 2005 the richest district's spending per primary student, at RMB9,759, was 10 times the RMB861 in the poorest district (Gu, 2011: 17). In 2013, by contrast, the ratio in compulsory education had been reduced to 1.43 (SEC, 2014)

Another policy, introduced in 1997, required primary and lower secondary schools to recruit students, including migrant children, from their neighbourhoods without entrance examinations (Li, 2007; SEC, 2015a, 2015b). Accompanying measures required detracking within schools. Primary and lower secondary schools were prohibited from ranking students and from allocating high-achievers to key classes.

The authorities recognised that the nearby-allocation policy would only work well if qualitative disparities were reduced between neighbourhoods. In order both to spread quality and to harness the leadership of former key schools, the government established 'educational groups' in which elite institutions

were given responsibility for the performance of partnering schools (Tan, 2013: 74-75; SEC, 2014; 2015b). The authorities also affiliated lower-prestige schools to key schools in order to utilise the reputations and resources of the latter. Resources were invested in teachers and managers through professional development and collaboration between elite and weaker schools (Gu, 2011; Zhang & Kong, 2012; Tan, 2013; SEC, 2014).

Interviewees for the present study indicated that the measures allowed a larger percentage of low-achieving and disadvantaged students to enter better-quality schools. The nearby-allocation policy and detracking were more strictly enforced in primary than in lower secondary schools, in ordinary than in elite schools, and in public than in private schools. In some primary schools, detracking in the form of mixed classes enabled desegregation of children from middle-class and poor families. To some extent it also enabled desegregation of migrant children.

However, the policy attracted some backlash. One teacher from an ordinary primary school reported that: ‘Shanghai parents don’t want their children to interact with migrant children’. The teacher added that: ‘Some students in my classes complained about the smell of children whose parents sold vegetables’. This sentiment was echoed by students and teachers in other public schools. Recognising such attitudes, some schools found ways to maintain previous practices. A teacher in an elite lower secondary school reported that most students were high performers from well-off families and that the school had “flexibility not to undertake strictly mixed classes”. Interviewees felt that the school equalisation policies had been more effective in ordinary public primary schools and least effective in elite secondary schools, especially private ones. The government required schools to admit stipulated percentages of migrant children, yet elite schools negotiated ways to maximise the intake of high-performing students. Also, many evaded the detracking requirements by changing the labels for high-performing classes into ‘experimental/enrichment classes’ or ‘innovation classes’.

As household incomes increased and more families became aware of the benefits of key classes, competition increased (Wu, 2014). Elite schools and key classes were famous for their *Zhongkao* and *Gaokao* performance and for promotion rates to prestigious institutions at the next level. To get into these schools/classes, advantaged families used economic and social capital to distinguish their children from peers. Among the strategies was investment in tutoring, which excluded students who could not afford it and provided avenues for ranking and grouping.

Unequalising shadow education in Shanghai: uneven access

While schooling in Grades 1-9 has become universal, private tutoring has not and thus gives opportunities to some students which are not received by others. The research survey indicated that 58.7% of sampled students in Grades 3-9 had received tutoring of various types during the previous 12 months. The most popular subjects were mathematics (81.5% of those who had received tutoring) and English (76.8%), mainly because they were among core components for admissions at all levels. Families invested in tutoring in all grades, i.e. not just at the transition points, and demand was heightened by peer pressure.

Table 2. Binary logistic models of the access to private tutoring (Grades 6-9)

Independent Variables	Dependent Variable		
	Beta	S.E.	Exp (B)
Community characteristics			
<i>District (Reference: Urban core)</i>			
B (Suburban)	-.686***	.187	.504
C (Peripheral)	-.209	.218	.811
<i>Residential status (hukou) (Shanghai = 0)</i>	-.724***	.178	.485
Household level			
<i>Highest level of parental education (Reference: Upper Secondary or Below)</i>			
Associate or undergraduate	.192	.174	1.211
Postgraduate or above	.186	.354	1.205
<i>Family size (Single child = 0)</i>	-.684***	.172	.505
<i>Private cars (No private cars = 0)</i>	.359**	.166	1.433
<i>Family income (Reference: <=5,000 yuan)</i>			
5,001–15,000 yuan	.500***	.177	1.648
>15,000 yuan	.719***	.271	2.053
Individual level			
<i>Gender (Male = 0)</i>	.187	.152	1.206
<i>Self-assessed Academic Achievement</i>	.139**	.068	1.149
N (included in analysis)	892	-	-
Cox & Snell R Square	0.131	-	-
Goodness-of-fit test (Hosmer & Lemeshow)			
χ^2	12.765	-	-
df	8	-	-
Sig.	.120	-	-

Method: Enter. *: p<0.1; **: p<0.05; ***: p<0.01.

Table 2 shows factors shaping receipt of tutoring. The quantitative analysis showed that after controlling for other factors, suburban students were less likely to receive tutoring than urban counterparts. Interviews indicated that urban students and parents were more anxious about risk and uncertainties, because they had stronger perceptions of competition and experienced greater peer pressures. Residential status (*hukou*)^b was also a major factor, with students from other provinces being less likely to participate in tutoring than students with Shanghai *hukou*. Interviews indicated that most students with *hukou* of other provinces were migrants. They had fewer incentives to receive tutoring, partly because they viewed tutoring as a means to climb the academic ladder in Shanghai which for them was likely to be a dead end. A school principal pointed out that official policies prevented migrant children from taking the *Zhongkao* and proceeding to regular upper secondary schools in Shanghai. Many of those who aspired for upper secondary education

returned to their places of origin one or more years before Grade 9 in order to sit the *Zhongkao* in those locations.

At the household level, families with private cars and higher incomes were more likely to invest in tutoring. This matched patterns elsewhere (see e.g. Bray, 2009: 32-34). However, correlations with parental education were not statistically significant. One interpretation could be that access to tutoring was determined more strongly by parental economic capital than by parental cultural capital. The interviews suggested that tutoring was an important strategy to increase family cultural capital for parents who were not well educated but able to afford it. Therefore, in order to increase their children's chances of academic success, parents with high incomes would invest in tutoring no matter how much education they had themselves received. At the same time, regardless of parental education, students with Shanghai *hukou* and those in the urban districts were generally more competitive and more engaged in the culture of tutoring. Probably for similar reasons, the difference between boys and girls in the probability of receiving tutoring was not statistically significant after controlling for other factors.

Children with siblings were less likely to participate in tutoring. Such a pattern partly indicated the psychology of parents (and grandparents), who seemed more anxious to use tutoring to increase life chances for the 'priceless' single child (Liu, 2016). Patterns were particularly salient among middle-class families interviewed. They aspired for intergenerational transmission of social status or social mobility, and tutoring was 'outsourced' to achieve this goal through a prestigious academic trajectory.

Students were asked to provide their self-assessed levels of academic achievement based on performance in major examinations. After controlling for other variables, students reporting higher academic levels were more likely to receive tutoring (Table 2). Tutoring seemed to be an enrichment strategy for the higher performers, which further widened the achievement gap between the high and low performers.

Unequalising shadow education in Shanghai: tracking and labelling

The above patterns of access to tutoring reflect social and academic stratification. Tutoring participation has become a label that classifies students into haves and have-nots, and further affects schooling experiences. Four fifths of the teachers indicated that parents and students felt unfairly disadvantaged when they discovered that other families arranged tutoring. The remark was echoed by most parents and students. One parent recalled a feeling of discrimination when the class teacher of her Grade 4 son announced in class the list of students receiving tutoring. 'How can the teacher be so insensitive and discriminate openly against children without tutoring?', she asked. 'It forced us to start arranging tutoring for his mental and emotional health.'

The tutoring-participation labels and the labelling in schools reinforced each other. For instance, two teachers of (hidden) low-rank classes in a poor-district primary school indicated that few students in their classes received tutoring, not so much because of financial constraints but more because they were 'slow learners' with 'low learning motivations'. As such, non-participation in tutoring strengthened the teachers'

stereotyping of low-performing students. Another teacher in an urban school made similar remarks: ‘Low-performing students remain weak even when they have tutors. I only encourage high-performers to attend.’

In contrast, teachers and parents in elite schools reported that some teachers ‘advised’ low-performers to receive tutoring and asserted that they were ‘incapable of catching up in class without tutoring’. Students willing to receive tutoring were viewed by many teachers as ‘motivated’, ‘hardworking’, or ‘revivable’. Similarly, parents arranging tutoring were considered ‘responsible’, regardless of the effectiveness of tutoring.

Discrimination also existed among students. When asked how they felt when they received tutoring but others did not, two high performers implied that the students not receiving tutoring were lazy or unteachable. Other students who identified themselves as high achievers expressed a sense of superiority over their peers when receiving ‘special tutoring’. Their perception was influenced by the fact that the type of tutoring they received was usually only available to high achievers.

Ranking the unranked

Despite the prohibition of ranking, students in most schools that the researchers visited were still ranked on their examination scores. However, almost all sampled primary schools restricted the information to school personnel, and did not publicly divulge it to parents. The hidden rank was used as reference for teaching and guidance. Interviewees stated that when ranking ceased to be officially accessible in schooling, many parents became anxious because they believed strongly in the legitimacy of ranking. They ‘felt lost’ and desperately sought alternatives to ‘re-rank’ their children so that they could make informed decisions about their children’s school careers. Some used social capital to obtain the information from schools, while others turned to tutoring companies with chains across the municipality. These companies organised standardised examinations in mathematics and English, and ranked tutees of all branches. The rank served three major purposes: 1) to meet parental demand for predictors, 2) to offer services on learning and admission consultancy, and 3) most importantly, to select tutees and/or place them on different track levels.

Tracking the detracked

Some tutorial centres track students in the way that schools used to do, i.e. through both ability and curriculum tracking. The mechanisms favour privileged high achievers from prosperous families, and are factored into school selection processes.

Ability tracking in tutoring

Two of Shanghai’s most popular tutoring companies, here called A and B (the top two players, dominating the tutoring market), selected tutees through standardised entrance examinations. Almost all the high-performing students interviewed in the study had received tutoring in the two companies. One parent indicated that families had to line up several months ahead to sit the entrance examination for Company A. The company charged monthly fees of RMB10,000 (US\$1,200) for Grade 9, which was out of reach for most families. The

entrance examination was the principal mechanism for exclusion of low achievers and for ability grouping among those admitted. For example mathematics tutees in Company A were assigned to four tracks: basic, enrichment, elite, and special talent class (fourth rank for Grades 1-5) or top class (fourth rank for Grades 6-9). The first three tracks used the same textbooks but were supplemented with materials of ascending difficulty. Instruction in basic classes was the slowest, and focused on repetition and consolidation of knowledge foundations. The curricula of the other three tracks were ahead of and more difficult than the school curriculum, with speedy instruction. Enrichment classes claimed to train students in analytical skills with more difficult exercises than the basic classes, while elite classes trained students for more difficult content. The special talent and top classes were instructed by the ‘best’ tutors, most of whom, according to the interviewees, were graduates of elite universities or former prestigious schoolteachers with abundant experience. The curriculum of this track was far beyond the school curriculum, and tutees had much drilling for difficult examination papers.

Most tutoring provided by Company A was advanced learning for high performers, and had a backwash on schooling. Company A was not the only provider of advanced tutoring in the market, and students also learned ahead of the school curriculum in classes provided by Company B and other centres, and from school teachers and college students. Teachers, students and parents reported cases in which teachers of mathematics, English and Chinese cut basic instruction in school classes because they assumed that most students had learned the materials in advance. The phenomenon forced some students to receive tutoring in order to keep up. The teachers were then able to accelerate their teaching and add higher-level materials. The process thus became a hidden track within the schools.

Some parents expressed frustration that they ‘had no choice’ but to arrange advanced tutoring so that their children could keep up with peers receiving such help. Otherwise, in the words of one mother, her child might ‘lose confidence and sink to the bottom of the class’, or, as feared by another parent, would have to change to another class or school with ‘slower learners’. When teachers were asked what they could do to help such parents, they indicated their dilemma between ‘catering for the majority’ and ‘catering for the few have-nots’. Two teachers stated that they were pressurised by the performance indicators and pushed for teaching speed by ‘the majority of parents who arranged advanced tutoring for their children’. Some teachers complained that students with higher-track tutoring were less involved in the school-based learning because they considered it too simple. Some of these students and their parents trusted the tutors more than the teachers.

Ability tracking through school tutorial classes

Another form of ability grouping was associated with collaboration between schools and tutoring providers. Under the pressure for performativity despite the prohibition of tracking, some schools contracted tutoring providers for classes with advanced curricula. The lessons were disguised as extracurricular activities but in fact were school strategies to increase promotion rates to elite schools.

For instance, School A was a suburban public primary school. The teachers and school managers indicated that detracking in School A (including desegregation of migrant children) had impeded maintenance of promotion rates since the teachers could no longer group the elite students and offer an advanced curriculum. Therefore, ‘interest’ (tutoring) classes in English and mathematics were offered (and charged) after official school hours for elite students. In this case, tutoring providers were experienced teachers from School A and other elite schools.

Elite primary School B and lower secondary School C contracted tutoring companies to provide such lessons to the best performing students. These two schools still secretly allocated higher performers to unofficial high-track classes. However, in order to concentrate resources on top students with the potential to enter top-ranking schools, they selected a small group (20-30 students) for intensive training through arrangement with the tutoring companies. Students admitted to these tutorial classes were selected through an entrance examination. Some students sought tutoring elsewhere in order to get into the school-contracted tutoring classes.

These strategies privileged high achievers from affluent families. Some students who were excluded felt disadvantaged, while others considered such classes out of reach because the different treatment had internalised the perception that they were of ordinary intelligence.

Tutoring and retracking at school

As noted above, some schools resisted the detracking reform by inventing counter-measures to retrack the students. They either created new labels or kept the high performers in separate classes with no official labels and allocated the best teachers. In order to get into such classes, students had to perform far above the minimum requirement for admission to corresponding schools. Most students in these classes had received tutoring to enter, and maintained tutoring to keep up.

In lower secondary School D where two out of six classes in Grade 9 were on the hidden high track, teachers and students interviewed from the high-track classes reported 90-100% participating in tutoring. Three out of four students interviewed received tutoring for high-track placement. By contrast in the ordinary classes composed mostly of migrant children, fewer than 5% of students were estimated to receive tutoring.

Concerning this use of tutoring for retracking and resegregation, one class teacher explained: ‘As you have learned, almost all students in this (high track) class receive tutoring. They learn at greater speed than the other class (low track, mostly migrant children). If we mix them, the migrant children can hardly catch up and learn in class.’ Similar remarks were made by several other teachers and the principal from another lower secondary school. While the teachers’ perception was valid, tutoring to some extent reinforced the perception that tracking was desirable.

Curriculum tracking

Ability tracking was related to curriculum because it usually involved choice of curriculum as well as ranking of academic achievements. Nevertheless, curriculum tracking may be considered to be a separate category. Among the many modes of curriculum tracking in tutoring, two deserve particular attention because they were closely linked to selection processes in the schools.

Tutoring for competitions

Alongside the special talent/top class in Centre A was tutoring for Olympiads and equivalent competitions in mathematics, sciences, English, and Chinese. According to the interviewees, the curricula in these classes were completely different from school curricula, and only outstanding students were able to access them. Interviewees described such students as ‘genius’, ‘smart’, ‘persistent’, ‘independent’, ‘motivated’, and ‘awesome’. The student interviewees in this category were respected by their peers and valued by relatives, tutors and teachers. Teachers and parents expressed high expectations towards such students. One mother said: ‘I always remind my child not to rest on his achievements. He has space to climb higher in the rank. I believe in him.’ And a mathematics teacher honestly expressed her view that such students had inborn talents and should advance further through tutoring. These students appeared very confident and competitive, and some considered themselves superior to other students. They had clear visions of career paths, fitting the prestigious academic trajectory expected by their parents and teachers. Most were under great pressure to live up to the labels.

The chief purpose of tutoring for competitions was admission to elite institutions. Following the abolition of entrance examinations for lower secondary schools, families gained attention by securing as many prizes and competitive certificates as possible. Performance in Olympiad mathematics was among the perceived necessities for access to interviews by most elite lower secondary schools.

High-ranking students in the special talent/top class in Centre A were recommended to sit a secret entrance examination to enter high-track classes in elite schools and/or secured direct admission. Government policies permitted Olympiad winners in particular subjects to secure direct allocation (*baosong*) with exemption from *Zhongkao* and *Gaokao* to elite upper secondary schools and high-status universities. Since schools were prohibited from providing training in Olympiads because it was beyond the official curriculum, interviewees said that it was ‘almost impossible’ to secure *baosong* without tutoring.

Grade 4 and Grade 5 tutorial classes

The special tutorial classes called *Xiaosiban* (Grade 4 classes) and *Xiaowuban* (Grade 5 classes) played a particular role in admission to elite lower secondary schools. They helped the families to access those schools, and they helped the schools to recruit high-performing students. The curriculum in these classes focused on lower-secondary knowledge with frequent tests and evaluation. Only the best performers had access to these tutorial classes, for which entrance examinations were the gateway.

Some tutors of the classes were the students' existing school teachers, and the tutoring changed teacher-student relationships within the schools. Almost all Grade 5 teachers in mathematics and English in one primary school that the researchers visited operated such classes in collaboration with an elite lower secondary school and with support from their own school managers. Students selected for the classes received more attention and free tutoring at school. Two students reported closer relationships with these teacher-tutors and corresponding teacher dissatisfaction with students who did not attending the tutorial classes.

Elaborating on the role of tutoring in selection, *Xiaosiban* and *Xiaowuban* were usually arranged through collaboration between schools and tutoring providers, and many teachers and school leaders were heavily involved. Students were tracked according to their examination grades, and families knew that high performers would attract the attention of their tutors and be recommended as potential 'qualified' students. Students were in addition socialised in behaviour and respect for tutors.

While schools were detracking, tracking was widely practiced in tutoring. As discussed above, the tracking in tutoring introduced new indicators for labelling the high performers from well-off families, thereafter concentrating the best resources on them. It facilitated admission of these students to elite institutions. These institutions were also enabled in the processes to secure high-performing students and maintain their status in the school hierarchy. Tracking also intensified competition and strengthened the examination culture in the mainstream system. Half of the teachers interviewed also raised concerns about the values that such tutoring transmitted, such as 'pragmatism' and 'selfishness' over 'compassion' and 'collaboration'. Thus the schooling was going through tracking/segregation, detracking/desegregation and retracking/resegregation via tutoring.

Conclusion

Messages about inequalities that arise from tracking in schools are well established in the literature. Similarly, messages about inequalities that arise from shadow education are becoming well established. This paper nevertheless adds to understanding by putting the literatures together in a way that, to the authors' knowledge, has not been done previously.

The Shanghai government, like many counterparts not only in China but also around the world, has devoted much effort to equalisation in schooling. Primary and lower secondary schools have been prohibited both from operating entrance examinations and from tracking. They have further been required to recruit students from their immediate neighbourhoods. Faced by these constraints, families and elite schools desiring advantages in the competitive society have turned to the shadow sector. The large tutorial institutions have operated their own tracking systems and entrance examinations, and the schools have received signals on which students were high performers and therefore deserving recruitment.

As in most other parts of the world (Bray, 2009; Aurini et al., 2013; Bray et al., 2013), higher socioeconomic families and stronger performers in the education system were more likely to receive shadow

education and thus to retain advantages despite the government's equalisation efforts. Elite schools maintained or strengthened their status by securing a quality intake through tutoring and by encouraging tutoring participation. The tutoring also restored ability grouping within some schools undertaking detracking. Tutoring-created labels shaped students' relationships with peers, teachers and relatives, disadvantaged low achievers, and pressured high achievers to excel further. These were components of what Oakes et al. (1990) had called 'multiplying inequalities'. The corollary was that non-participation in tutoring reinforced labelling of low-achieving students in some schools.

These patterns raise a question whether educational processes can ever be fully equalised. The answer seems to be negative – that when governments do succeed in one domain, namely the schools over which they have direct control, the sector over which they have less control compensates by operating in its own way. Institutions find ways to collaborate in 'mixing zones' at the confluence of schooling and shadow education (Zhang & Bray, 2017). This observation does not mean that governments should not try to equalise schooling, but planners would be wise to recognise their limitations and the extent to which the shadow sector may undermine them. They may decide to regulate the shadow sector more fully to limit the extent to which its operations counter the schooling policies; but there again they are likely to encounter limits (Bray & Kwo, 2014).

Meanwhile, the study highlighted ways in which shadow education had a backwash on schooling. For example, students with higher-track tutoring were less involved in the school-based learning because they considered it too simple. Some of these students and their parents trusted the tutors more than the teachers. Some tutors of the classes were the students' existing school teachers, and the tutoring changed teacher-student relationships within the schools. Poorly performing students, especially those without tutoring, accepted identities as low-achievers. By contrast, high-achieving students faced considerable pressure to live up to expectations, and tutoring resulted in more tutoring. Once again, this paper shows the need for educational planners to look outside the schools as well as inside them for sources of educational inequality.

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References:

- Aurini, J., Davies, S. & Dierkes, J. (eds.) (2013). *Out of the shadows: The global intensification of supplementary education*. Bingley: Emerald.
- Bourdieu, P. (1973). Cultural reproduction and social reproduction. In R. Brown (Ed.), *Knowledge, education and cultural change: Papers in the sociology of education*. London: Tavistock, 71-112.
- Bray, M. (1999). *The shadow education system: Private tutoring and its implications for planners*. Paris: UNESCO International Institute for Educational Planning.

- Bray, M. (2009). *Confronting the shadow education system: What government policies for what private tutoring?* Paris: UNESCO International Institute for Educational Planning.
- Bray, M. & Kobakhidze, M.N. (2015). Evolving ecosystems in education: The nature and implications of private supplementary tutoring in Hong Kong. *Prospects: Quarterly Review of Comparative Education*, 45 (4), 465-481.
- Bray, M. & Kwo, O. (2013). Behind the façade of fee-free education: shadow education and its implications for social justice. *Oxford Review of Education*, 39 (4), 480-497.
- Bray, M., Mazawi, A.E. & Sultana, R.G. (eds.) (2013). *Private tutoring across the Mediterranean: Power dynamics and implications for learning and equity*. Rotterdam: Sense.
- Burris, C.C. (2014). *On the same track: how schools can join the twenty-first-century struggle against resegregation*. Boston: Beacon Press.
- Byun, S.Y. (2010). Does policy matter in shadow education spending? Revisiting the effects of the high school equalization policy in South Korea. *Asia Pacific Education Review*, 11(1): 83-96.
- Chan, J. (2007). Giftedness and China's Confucian heritage. In Phillipson, S.N., & McCann, M. (Eds.), *Conceptions of giftedness: Sociocultural perspectives* (pp.35-64). Mahwah: Lawrence Erlbaum.
- Cheng, K.M. (2010). Shanghai and Hong Kong: Two distinct examples of education reform in China. In OECD, *Strong performers and successful reformers in education: Lessons from PISA for the United States* (pp.83-115). Paris: Organisation for Economic Co-operation and Development.
- China, People's Republic of. 2010. *Outline of China's National Plan for Medium and Long-Term Education Reform and Development (2010-2020)*. Beijing: People's Publishing House. [in Chinese]
- China, National Bureau of Statistics. (2015). *China Statistical Yearbook - 2015*. Beijing: China Statistics Press. [in Chinese]
- Creswell, J.W. (2012). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. 4th ed. Boston: Pearson.
- Dawson, W. (2010). Private tutoring and mass schooling in East Asia: Reflections of inequality in Japan, South Korea, and Cambodia. *Asia Pacific Education Review*, 11(1), 14-24.
- Dierkes, J. (2013). The insecurity industry: Supplementary education in Japan, in J. Aurini, S. Davies & J. Dierkes (eds.), *Out of the shadows: The global intensification of supplementary education* (pp.3-21). Bingley: Emerald.
- Ding, X. (2011). *Policy metamorphosis in China: A case study of minban education in Shanghai*. Lanham: Lexington Books.
- Douglas, J.W.B. (1964). *The home and the school: A study of ability and attainment in the primary school*. London: Macgibbon & Kee.
- Gamoran, A. & Mare, R.D. (1989). Secondary school tracking and educational inequality: Compensation, reinforcement, or neutrality? *American Journal of Sociology*, 94(5), 1146-1183.
- Gamoran, A., Nystrand, M., Berends, M. & LePore, P.C. (1995). An organizational analysis of the effects of ability grouping. *American Educational Research Journal*, 32, 687-715.
- Gibbs, G.R. (2007). *Analyzing Qualitative Data*. London: SAGE.
- Gu, C.L. (2011). Assessing policies on balanced development of compulsory education in Shanghai. Master's dissertation, Fudan University. [in Chinese]
- Hartmann, S. (2013). Education "home delivery" in Egypt: Private tutoring and social stratification. In M. Bray, A.E. Mazawi & R.G. Sultana (eds.), *Private tutoring across the Mediterranean: Power dynamics and implications for learning and equity* (pp.57-75). Rotterdam: Sense.
- Johnson, B. & Christensen, L. (2012). *Educational research: Quantitative, qualitative, and mixed approaches*. Los Angeles: SAGE.

- Jokić, B. (ed.) (2013). *Emerging from the shadow: A comparative qualitative exploration of private tutoring in Eurasia*. Zagreb: Network of Education Policy Centers.
- Kelly, S. (2007). The contours of tracking in North Carolina. *High School Journal*, 90: 15-31.
- Lee, C.J., Lee, H. & Jang, H.M. (2010). The history of policy responses to shadow education in South Korea: Implications for the next cycle of policy responses. *Asia Pacific Education Review*, 11(1), 97-108.
- Liu, J. (2012). Does cram schooling matter? Who goes to cram schools? Evidence from Taiwan. *International Journal of Educational Development*, 32 (1), 46-52.
- Liu, J. Y. (2015). How a research instrument changed in different settings: Methodological lessons from adaptation and adjustment. In Bray, M.; Kwo, O. & Jokić, B. (eds.), *Researching Private Supplementary Tutoring: Methodological Lessons from Diverse Cultures*. Hong Kong: Comparative Education Research Centre, The University of Hong Kong, and Dordrecht: Springer, pp. 247-259.
- Liu, F. (2016). The rise of the “priceless” child in China. *Comparative Education Review*, 60(1), 105-130.
- Mercer, J.R. (1992). The impact of changing paradigms of disability on mental retardation in the year 2000. In L. Rowitz (ed.), *Mental retardation in the year 2000* (pp.15-38). New York: Springer.
- Oakes, J. (2005). *Keeping track: How schools structure inequality* (2nd ed.). New Haven: Yale University Press.
- Oakes, J., Rand Corporation & National Science Foundation (U.S.). (1990). *Multiplying inequalities: The effects of race, social class, and tracking on opportunities to learn mathematics and science*. Santa Monica: Rand Corporation.
- Pallegedara, A. (2012). Demand for private tutoring in a free education country: The case of Sri Lanka. *International Journal of Education Economics and Development*, 3(4), 375-393.
- Patton, M.Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks: SAGE.
- Rist, R.C. (2007). On understanding the processes of schooling: the contributions of labelling theory. In Sadovnik, A. (ed.), *Sociology of education: A critical reader* (pp.71-82). New York: Routledge.
- Roesgaard, M.H. (2006). *Japanese education and the cram school business: Functions, challenges and perspectives of the Juku*. Copenhagen: NIAS Press.
- Rosenbaum, J.E. (1976). *Making inequality: The hidden curriculum of high school tracking*. New York: Wiley.
- Sato, Y. (ed.) (2012): *History: The 100 years of juku and 50 years of juku associations*. Tokyo: Private Tutoring Federation. [in Japanese]
- SEC (Shanghai Education Commission) (2012). *Basic facts of education in Shanghai*. http://www.shmec.gov.cn/web/concept/show_article.php?article_id=363. [in Chinese]
- SEC (Shanghai Education Commission) (2013). *List of demonstration high schools in Shanghai*. <http://www.shmec.gov.cn/web/glx/listInfo.php?id=24819>. [in Chinese]
- SEC (Shanghai Education Commission) (2014). *The 2013 achievements in balanced development of compulsory education*. http://www.shmec.gov.cn/web/jyzt/zygz11/jyzt_show.php?area_id=3001&article_id=76058. [in Chinese]
- SEC (Shanghai Education Commission) (2015a). *Regulations on Admission at the Level of Compulsory Education*. <http://www.shmec.gov.cn/html/xxgk/201502/420022015001.php>. [in Chinese]
- SEC (Shanghai Education Commission) (2015b). *Guidelines on Balanced Development of Education and Promotion of Educational Groups*. <http://www.shmec.gov.cn/html/xxgk/201511/402152015023.php>. [in Chinese]
- Sellar, S. & Lingard, B. (2013). Looking East: Shanghai, PISA 2009 and the Reconstitution of Reference Societies in the Global Education Policy Field. *Comparative Education*, 49(4), 464-485.

- Silova, I., Būdienė, V. & Bray, M. (eds.) (2006). *Education in a hidden marketplace: monitoring of private tutoring*. New York: Open Society Institute.
- SMBS (Shanghai Municipal Bureau of Statistics) (2015). *Shanghai Statistical Yearbook 2015*. Beijing: China Statistics Press. <http://www.stats-sh.gov.cn/data/toTjnj.xhtml?y=2015>. [in Chinese]
- Snijders, T. A. B. & Bosker, R. J. (1999). *Multilevel analysis: An introduction to basic and advanced multilevel modeling*. London: SAGE.
- Tan, C. (2013). *Learning from Shanghai: Lessons on achieving educational success*. Dordrecht: Springer.
- Wells, A.S. & Oakes, J. (1996). Potential pitfalls of systemic reform: Early lessons from detracking research. *Sociology of Education*, 69, 135-143.
- Wu, X. (2014). *School choice in China: A different tale?* New York: Routledge.
- Xie, A.B. & Tan, S.H. (1997). *National report on the quality of compulsory education*. Shanghai: East China Normal University Press. [in Chinese]
- Xue, H.P. & Ding, X.H. (2009). A study on additional instruction for students in cities and towns in China. *Educational Research*, 30 (1), 39-46. [In Chinese]
- Yang, D.P. (2006). *Ideals and realities of education equality in China*. Beijing: Peking University Press. [in Chinese]
- Yu, H. & Ding, X. (2011). How to get out of the prisoner's dilemma: Educational resource allocation and private tutoring. *Frontiers of Education in China*, 6(2), 279-292.
- Zhang, M.X., Lu, J., Zhan, S.L., Zhu, X.H. & Wang, T.T. (2011). PISA in a professional perspective. *Educational Research*, 6, 3-10. [in Chinese]
- Zhang, M.X. & Kong, L.S. (2012). An exploration of reasons for Shanghai's success in the OECD Program for International Student Assessment (PISA) 2009. *Frontiers of Education in China*, 7(1), 124-162.
- Zhang, W. (2014). The demand for shadow education in China: Mainstream teachers and power relations. *Asia Pacific Journal of Education*, 34(4), 436-454.
- Zhang, W. & Bray, M. (2016). Shadow education: The rise and implications of private supplementary tutoring. In Guo, S. & Guo, Y. (eds.), *Spotlight on China: Changes in education under China's market economy*. Rotterdam: Sense, 85-99.
- Zhang, W. & Bray, M. (2017). Micro-neoliberalism in China: Public-private interactions at the confluence of mainstream and shadow education. *Journal of Education Policy*, 32(1), 83-81.