Chapter 3 System Reform in China: Mobilising and Sharing Resources Across Schools



Haiyan Qian and Allan Walker

3.1 Introduction

Many education reforms are transient, regardless of their actual or potential impact (Harris, 2010). Levin (2008) attests that too often the changes intended to improve education outcomes leave 'many of the basic features of schooling unaltered' (p. 64). Many reform programmes, improvement initiatives and other interventions focus solely on school-level change and improvement. Thus, approaches to change may be limited in terms of the sheer scale of the task and/or of the pace of change itself (Harris, 2010; Harris & Chrispeels, 2008). Effective school improvement may then require a mindset shift from individual schools to system-level thinking (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014). A system in this context includes the 'entirety of the educational support network for schools' (Hopkins et al., 2014, p. 270). Whole system reform involves all schools in the system getting better, often focusing primarily on closing the gap between high- and low-performing schools (Fullan, 2000).

Education systems worldwide differ in history, context, policy focus and implementation, in addition to results (Liang et al., 2016). Shanghai has demonstrated successful performance in international benchmarking studies such as the Programme for International Student Assessment (PISA) over the past decade (OECD, 2010a). One reason for Shanghai's success is its system-wide reform efforts (Cheng, 2010; Friedman, 2013; Liang et al., 2016). For example, after a visit to Shanghai schools, Pulitzer Prize winner Thomas L. Friedman was impressed by Shanghai's 'relentless focus on all the basics that we know make for high-performing schools but that are difficult to pull off consistently across an entire school system' (Friedman, 2013). The World Bank report *How Shanghai does it*

H. Qian · A. Walker (⊠)

The Education University of Hong Kong, Hong Kong, China

e-mail: adwalker@eduhk.hk

reveals that Shanghai has a high degree of coherence between policy and implementation, which can be partly attributed to the top-down, centralised government administration (Liang et al., 2016).

This chapter provides a review of the improvement challenges facing Shanghai and the main approaches to systemic reform the city has adopted. The focus of this chapter is on reform efforts to overcome disparity and inequality and to strengthen poorer-performing Shanghai schools. The PISA results show that Shanghai students tend to perform well regardless of their background or the school they attend (OECD, 2010b). The OECD put together a series of education highlights of high-performing societies in a short video programme entitled 'Strong Performers and Successful Reformers' in 2012. Much of the video was devoted to the government leadership and a policy focus on improving low-performing schools (Liang et al., 2016). In addition, quality education (suzhi jiaoyu), or improving the quality of education, was proclaimed in the 1990s as one of the main drivers of China's reform policy (Feng, 2006). Quality was thus a primary goal of education while equity was neglected. This has been readdressed in recent years. For example, the Outline of China's National Plan for Medium and Long-Term Education Reform and Development issued in 2010 (Ministry of Education, 2010) set about *improving quality* and *enhancing equity* as the dual goals of educational development from 2010 to 2020.

Thus, various reform approaches aimed at enhancing equity have been implemented in China over the past decade. As an educational reform 'experimental city', Shanghai has piloted many reforms. For example, approaches such as commissioned administration (*weituo guanli*) and forming school consortiums were first initiated in Shanghai (Cheng, 2010; Liang et al., 2016) and have now been widely adopted in other Chinese cities. A caveat to this is that Shanghai is financially much better off than most cities in China and has made more strides to overcome disparity than other provinces. Bearing this caveat in mind, Shanghai presents itself as a worthwhile case for examining the main system-level changes China has adopted, and will adopt.

The chapter has four sections. Following the introduction, the next section summarises the improvement challenges Shanghai faces in removing disparities between schools. The third section illustrates some of the main strategies Shanghai has adopted to mobilise financial, human and intellectual resources to reduce disparities between schools and strengthen weaker schools. The fourth section identifies the lessons that can be learned from Shanghai.

3.2 Improvement Challenges

China and Shanghai face formidable challenges to overcome disparity and inequity due to two long-standing structural settings: the household registration (*hukou*) system and the 'key' (*zhongdian*) school policy.

3.2.1 The Hukou System

The *hukou* system was implemented as an attempt to control population movement within China. It is a form of population registration that has been formally required and legalised since the 1950s (Chan & Zhang, 1999). The *hukou* system influences almost all aspects of Chinese people's lives. Yu (2002, p. 12) described the impact of *hukou* as follows:

After birth you should get a *hukou* right away. You need *hukou* to enter kindergarten; and you need local *hukou* to find a job. When you date, you should know the other person's *hukou*. All kinds of permits can only be processed with *hukou*; and all kinds of benefits depend on your *hukou*. When you move to another place, you need to change the *hukou*. When you die, you remove your *hukou*.

This system binds people to their place of registration, or *hukou* location (*hukou suozaidi*), which can be literally translated as 'where the *hukou* resides' (Fan, 2008). The *Hukou* location enables individuals to gain access to benefits in a specific locality that are normally unavailable to individuals whose *hukou* location is elsewhere (Fan, 2008).

Hukou reinforces institutional and social barriers between rural and urban China, as every Chinese citizen was classified as either 'agricultural' (nongcun) or 'non-agricultural' (feinong) through this system of Household Registration (Fan, 2008; Solinger, 1999). The effect of hukou is to create a 'caste-like system of social stratification' between urbanites and rural peasants (Potter & Potter, 1990). In the not-so-distant past, social welfare benefits, including access to subsidised housing, education, medical care and retirement benefits were available only to those with urban hukou (Solinger, 1999). Those who were designated 'rural' were entitled to none of these benefits (Fan, 2008). Thus, the hukou system privileged urban citizens over their rural counterparts and excluded some students outside the state education system.

Shanghai is thus presented with two associated challenges. First, the city has urban and rural districts and thus needs to close the gap in the quality of education accessed by its own urban and rural *hukou* holders. Second, over the past 30 years large-scale rural-to-urban migration has occurred in China, and Shanghai has been one of the principal recipients of migrant workers (Cheng, 2010; Goodburn, 2009). The children of migrant workers are entitled to receive free compulsory education (five-year primary school and four-year junior secondary school education in Shanghai). Financial, manpower and moral commitments of the local government are thus required to provide equitable education opportunities to students without Shanghai *hukou*.

3.2.2 The Key School Policy

The elitist bent of Chinese government education policy over much of the last 50 years has tended to favour 'key' schools. The practice of differentiating schools into 'key'

and 'non-key' (or ordinary) status dates to the 1950s, when the young People's Republic was in desperate need of professional talent to rebuild the nation. 'Key schools' were established to identify and prepare the most promising students for higher levels of education (China Daily, 2006).

In May 1977, only eight months after the fall of the Cultural Revolution leaders, Deng Xiaoping proclaimed that China would reintroduce the key-school system (Thogersen, 1990). It was restored throughout the country at all levels from kindergarten to university level in the late 1970s and early 1980s (Pepper, 1996). Unified entrance examinations were also restored at various levels and students were channelled into the hierarchy of schools on the basis of the exams (Pepper, 1996). The key schools admitted better students who then did better in terms of selection into higher-level key schools or universities (Cheng, 2010). Key schools remained the *crème de la crème* of China's education system, and produced the highest academic results with their concentrated resources. For example, in 1981, nationally there were 5271 key primary schools, accounting for 0.6% the total number (Ke, Chen & Ren, 2013).

Although the key school system provided the nation's needs for talent, this came at the expense of equity (China Daily, 2006). A less equitable educational system was manifested in at least three ways from the key school context. First, as Pepper (1996) argued, although the statistics on family background were deemed as sensitive and not available to researchers, the conventional wisdom among teachers and school administrators was that children of cadres and intellectuals were the most likely beneficiaries of key schools. Second, the key school mechanism subjected children to differentiated treatment at a very early age. It mercilessly threw the majority of the youngsters into disadvantage based on questionable judgments.

Third, as a result of the Matthew Effect, (which postulates that the rich get richer and the poor become poorer) key schools not only boosted performance in exams, but also served as a showcase of government achievements in promoting education. Thus, schools that had more money and better teaching staff and academic reputations tended to be designated 'key' and thus became stronger and received even more official assistance (Walker & Qian, 2018a). The 'non-key' schools, which were badly in need of government assistance, received less attention and less support, and as a result became less competitive and less attractive. Instead of leading the way to a more uniform increase in education quality, the disparities inherent in the key school system led to the polarisation of the key schools and of the other ordinary schools (Hua, 2004).

Thus, vast disparities exist in terms of school infrastructure, teacher quality and qualification and student outcomes between schools of different statuses and schools located in different districts. The quality of education accessed by different students varied and some disadvantaged students, such as migrant children, had limited access to education opportunities. These challenges necessitated the mobilisation of collective energy to engage in joint reforms (Fullan, 2000). The next section reviews some of the major reform initiatives adopted over the past decade in Shanghai.

3.3 Approaches to Reform

To overcome disparity and inequality, Shanghai has focused attention on the entire system to improve weak schools and expand education services to disadvantaged students. Three major reform approaches are reviewed in this section: financial deployment and reallocation, structural innovation and mobilisation of quality teacher resources.

3.3.1 Expanding Financial Investment in Weak Schools and Disadvantaged Students

A key feature of Shanghai's public financing for education is the focus on improving poorly performing schools and proactively initiating new policies to expand the education services provided to migrant children and disadvantaged students.

Policies have been adopted to balance the different fiscal capabilities of urban and rural districts. The Shanghai Municipal Education Commission shoulders the main responsibility for educational affairs in Shanghai, in particular the financing and provision of affiliated institutions of higher education. The district governments are responsible for the financing and provision of preschool education, nine-year basic education and senior secondary education (Liang et al., 2016). Suburban and rural districts typically have more socio-economically disadvantaged students and students without Shanghai hukou. These districts also tend to have lower income levels and far lower capital spending on average than downtown schools (Shanghai Education Commission, 2004). Thus, at the district level, Shanghai implemented an 'education levy' to transfer resources more equitably. Under the policy, all districts collect an education tax, part of which is transferred to the municipal level. The municipal government then redistributes the proceeds of the tax to districts with poorer schools in the form of additional education funding (Liang et al., 2016). Districts in the rural areas of Shanghai are major beneficiaries of this policy. Between 2004 and 2008, over USD 500 million was transferred to rural schools to help them build new facilities and laboratories, purchase books and audio-visual materials and increase teacher salaries (Cheng, 2010). Free lunches were also provided to students whose family incomes were below the poverty line, or whose parent(s) has a rural residence (Liang et al., 2016).

Furthermore, the government invested huge amounts of money to provide and expand educational opportunities for migrant children, that is, children of migrant workers without Shanghai *hukou*. In 2008, the Shanghai government launched a new initiative entitled the *Three-Year Action Plan* (2008–2010) for Compulsory Education of Migrant Children (Shanghai Education Commission, 2008a). During the three-year period, a large sum was invested to build 144 new primary and junior secondary schools. These new schools provided 150,000 school places (Zhang, 2013). An additional policy released in 2008 (Shanghai Education Commission, 2008b) reduced the

documentary and financial requirements for migrant children to attend public schools. The new policy in 2008 stated that migrant children could go to public schools, as long as they could provide two certificates: their parent(s)' rural ID certificates and temporary residence/employment permits (Qian & Walker, 2015). They did not need to pay any extra fee. In districts where public schools had limited places, the district governments were encouraged to sign contracts with selected private migrant-run schools and commission them to enrol migrant children (Shanghai Education Commission, 2004, 2008a). The government then gave per-head financial support to the commissioned schools so that they could provide the same free education for migrant children as for those in public schools. By the end of the implementation of the three-year Action Plan in 2010, 162 migrant schools were certified to receive public funds and provide free education (Lu, 2013). The municipal government allocated 1,000 yuan (about USD 160) from public expenditure for each migrant student the certified schools enrolled in 2008 (Shanghai Education Commission, 2008a). The expenditure increased annually, and by 2014 the per-head funding increased to 5,000 yuan (about USD 700) (Qian & Walker, 2017). The statistical data show that among the 1.2 million basic education students in Shanghai in 2013, almost 47% or 0.57 million were migrant children. Shanghai achieved a remarkable outcome by enrolling 77% of these migrant children in neighbourhood public schools and the remaining 23% in commissioned private schools with additional municipal government funding (Liang et al., 2016).

3.3.2 Implementing Structural Innovations to Strengthen Weak Schools

In 1994, Shanghai was the first jurisdiction in China to introduce neighbourhood attendance at primary and junior secondary levels, in effect eliminating the notion of key schools at these levels (Cheng, 2010). To strengthen the previously non-key schools, a series of structural innovations have been trialled and implemented in Shanghai over the past decade. The most influential of these include the 'commissioned administration' (*weituo guanli*) model, the 'New Quality School' project, and various approaches of forming school consortiums.

The 'commissioned administration' is a type of school custody programme in which the government commissions 'good' public schools to take over the administration of 'weak' ones (Cheng, 2010). The initiative was based on a successful experiment of Donggou Senior Secondary School in Pudong District. After four years of being entrusted to the Shanghai Education Management Consulting Centre, Donggou School improved from a 'low-tier school' to a well-recognised top-level school (Liang et al., 2016). The municipality-wide initiative was launched in 2007 and the municipal government devoted a special budget to provide incentives to strong schools or specialised education organisations to support weak schools, through a memorandum of understanding or a contract (Tan, 2013). In the same year, 10 good

schools in downtown Shanghai and other educational intermediary agencies took charge of 20 schools in rural districts (Cheng, 2010). In this model, the good schools work together with commissioned weak schools to develop a three-year or five-year school development plan that lays the groundwork for the long-term development of these schools (Liang et al., 2016). The good school usually appoints one of its experienced leaders (e.g., the deputy principal) to be the principal of the weak school and sends a team of experienced teachers to lead the teaching (Cheng, 2010; Tan, 2013).

The 'New Quality School' project was trialled in 2011, and the goal was to make each neighbourhood ordinary school a quality institution (Yin, 2013). Those recognised as New Quality Schools were grassroots schools that often enrolled substantial numbers of migrant students (Yin, 2012). Although not academically strong, these schools designed their own improvement plans, recognised student needs and strove to enhance students' self-esteem. This can be seen in the slogans used by the schools, such as 'You are not No. 1, but you are the only one,' 'Different lives, same success' and 'Do not give up on anyone, and make sure each student has a happy learning experience' (Yin, 2012). When a school acquired the title of 'New Quality School', they gained support and guidance from the Research Centre of New Quality Schools, which helped to design further development plans for each individual school (Shanghai Education Commission, 2015). The successful reform experiences of these New Quality Schools were documented in an attempt to scale up and extend to schools of similar status. According to the Three-Year Action Plan of Shanghai New Quality School Development (2015-2017) (Shanghai Education Commission, 2015), 250 schools with this title were established by 2017, accounting for 25% of schools providing compulsory education.

Another prominent trend was to establish a consortium of schools, where strong and weak schools were grouped into a cluster, with one strong school at the core (Cheng, 2010). The school consortiums take different forms. One is the 'one school with multiple campuses' (*yixiao duoqu*) model. This model is more common in suburban districts with an expanding population and fewer quality schools. Many young couples move to these districts due to lower real estate prices and bring with them a high demand for quality school education for their children. Thus, these districts initiated the radical step of having one quality school merge with several nearby weaker schools (*Zhongguo Jiaoyu Bao*, 11 July 2015). Under the same school name, the original weaker schools become different campuses of the good school. For example, one school where we conducted empirical research merged with three others to become a school with about 6000 students and 450 teachers (Walker & Qian, 2018a). When asked whether increasing the number of teachers would dilute the quality of teaching resources, the school principal replied that teaching resources were like seeds: they needed to spread to flourish.

Another form of consortium is to group one quality school with several weak schools while each school remains a separate entity. Such a consortium is usually named after the quality school as the core of the group. For example, Qibao Secondary School is a renowned exemplary school and was combined with ten other schools into a group known as the 'Qibao Education Group' (Cheng, 2010). Within the group, the

member schools can share quality resources that were previously owned exclusively by the core school. The latest figures show that 993 schools had joined consortiums of different forms by August 2017, accounting for 55% of all primary and secondary schools (Xu, 2017).

3.3.3 Promoting Cross-School Teacher Learning and Sharing Quality Teacher Resources

In addition to grouping schools together, other strategies were adopted to mobilise and share the professional and intellectual capital of quality teachers. These included teacher rotation policies and cross-school teacher development strategies.

Built-in incentives were used to temporarily transfer or rotate teachers to serve underprivileged populations and therefore allow struggling schools to catch up (Liang et al., 2016):

- Teachers who elected to work at rural schools in Shanghai would be prioritised in terms of admission to graduate schools and accreditation of higher teacher ranks, one-time monetary stipends and compensation.
- Every year about 20 outstanding teachers from central districts were placed in twinning schools in rural or suburban districts.
- A system of principal rotation was set up; in 2013, the city deployed nine skilled principals from central districts to schools in rural districts to serve as mentors and offer management advice for a two-year period.
- 'Senior-class' teachers that choose to teach in rural districts would receive a retirement extension of one to five years.

Another strategy was to have expert teachers play a more active role as crossschool instructional leaders. In Shanghai, teachers are classified into a tiered expertise 'ladder' that honours expert teachers at school, district and municipal levels (Qian & Walker, 2013). The evaluation criteria are multifaceted, with primary weight given to results from conducting public lessons and mentoring peer teachers. Teachers with more than 10 years' experience may apply and be evaluated for higher level district-level recognition. Typically, about five per cent of the teachers who meet the stricter selection criteria are granted titles such as district-level backbone teachers (gugan jiaoshi, or competent teachers). Among this group, about half are further recognised as Subject Leaders (xueke daitouren) at the district level. A handful of the Subject Leaders (approximately the top one per cent) can become Special-class Teachers (teji jiaoshi) at district and municipal levels (Xiu & Wang, 2015). Once teachers are formally recognised as Subject Leaders or Special-class Teachers, they need to assume leadership responsibility for practice-embedded and cross-school peer learning. They are expected to extend their teaching and instructional expertise to teachers at other schools. These formally recognised expert teachers are thus no longer 'assets' of only their own schools; their expertise and wisdom must be

shared across a wider group of teachers. Among these expert teachers, some are promoted to district and municipal-level Teaching-Research Offices (*jiaoyan shi*). As teaching-research officers, their job is to visit schools, observe teaching, provide feedback and organise cross-school peer learning and development activities. The offices organise city-level and district-level systematic teaching-research activities and collect the best teaching practices from different schools for dissemination and promotion (Liang et al., 2016).

3.4 Discussion

This section reviews the outcomes of reform approaches and the remaining challenges, and provides a discussion of what can be learned from the system-level changes in Shanghai.

3.4.1 Reform Outcomes and Remaining Challenges

Shanghai is a trendsetter in its execution of specific policies to support disadvantaged students, communities, schools and districts (Liang et al., 2016). It is one of the first cities to achieve universal primary and junior secondary education, and is also among the first to achieve almost universal senior secondary education (Cheng, 2010). Regarding the dual aims of quality and equity as identified in the National Plan for Medium and Long-Term Education Reform and Development (Ministry of Education, 2010), Shanghai has fulfilled its first task of ensuring each child can attend a school (*youxueshang*), and is moving towards the second goal of providing children with a quality education (*shanghaoxue*).

With specific support programmes and policies for children from low-income and migrant families, Shanghai has made relatively more progress in attaining equal and equitable access to schooling than any other region of the country. By eliminating the selective and elite key school system at the basic education level and promoting the 'commissioned administration' of schools, Shanghai has contributed to the national education policies directed towards the capacity building of weak schools. By launching projects such as the 'New Quality School' scheme, Shanghai is endeavouring to make each neighbourhood school a quality institution (Liang et al., 2016).

Despite government efforts to overcome disparity and inequality, enduring challenges remain.

First, the social integration of migrant children presents an ongoing challenge. In the urban districts, the enrolment of migrant children has led to an exodus of local students from many public schools. If their parents have the financial resources or social capital to place them elsewhere, they do so (Qian & Walker, 2015). Schools that enrol substantial numbers of migrant children are nicknamed 'street market

schools', due to the perception that migrant children spend their preschool years in street markets with their parents instead of attending formal kindergartens. Thus, if local children are assigned to a 'street market school' under the neighbourhood enrolment policy, their parents explore every opportunity to find other schools for them (Lu, 2013).

Second, a clear hierarchy of schools still exists, at least in the minds of parents. Taking junior secondary schools as an example, the top schools are either expensive, famous and private schools or elite public schools (mainly previous key schools), but there are very few of the latter. On the bottom rung are those previously known as non-key schools. These schools enrol large numbers of migrant children and local students from low SES families. Students from different socioeconomic backgrounds hold very different places of privilege in this hierarchical system. Schools of different status also attract very different populations.

Third, expert teachers and other resources are unevenly distributed between rural and urban districts, and in schools of different status (Qian & Walker, 2017). Teachers of the highest ranks, that is, special-class teachers, are rarely from the previous non-key schools (Ke, Chen & Ren, 2013). For the lowest status schools, particularly commissioned private schools that enrol migrant children, it is still exceedingly difficult to attract or retain any quality teachers despite a substantial increase in the pay of teachers in these schools (Qian & Walker, 2017).

While recognising the ongoing challenges, lessons can be drawn from the Shanghai model of system-level reforms.

3.4.2 Lessons that Can Be Drawn from Shanghai

Lesson 1 Prioritise lower-performing rather than higher-performing schools. The review indicates that huge systemic effort has been given to improving weaker schools in Shanghai. Schools in poorer areas and with lower status tend to gain financial and policy favours. This approach is in stark contrast to practices in other countries that reward top-performing schools and hope to 'weed out' low-performing schools (Liang et al., 2016).

Lesson 2 Rely on and utilise the resources of better-performing schools to support lower-performing schools. For example, high-performing schools are expected to partner with struggling schools to increase the quality of their leadership and teachers. Under the 'commissioned administration' scheme, a high-performing school can be awarded a contract, with funding attached, to improve a lower-performing school. The ex-Deputy Director of Shanghai Education Commission, Professor Zhang Minxuan, cited a Chinese idiom to explain the underlying belief during an interview: 'if the water in the river is getting higher, then the boat will be even higher' (Tucker, 2014). This suggests that if the lower-performing schools are getting better, then the good schools will be even better.

Lesson 3 Create a professional development system that continually increases school quality. Teachers have clear career ladders in Shanghai, and one of the expectations for teachers who wish to reach the top level is that they spend time teaching in lower-income areas. Teachers are not assigned or required to teach in such schools, but they are strongly encouraged and have career incentives to do so (Tucker, 2014). Multiple examples show that when a master teacher can spend a relatively long period of time in a rural or suburban school it can make a real difference to teacher morale and the school's capacity.

Lesson 4 Cultivate cross-school instructional leaders and grant them honours and responsibilities. The Shanghai system recognises master teachers and gives them honourable titles such as special-class teachers, subject leaders and backbone teachers at different levels. However, the honouring of a master teacher is also accompanied by the responsibility for developing teachers in their own schools and in others. Mechanisms such as 'Teaching-Research Offices' at district and municipality levels are also implemented to organise cross-school teacher development and to scale, share and disseminate good practices.

Lesson 5 Build a truly professional model of teaching and teachers. Tucker's (2014) interviews with leading scholars familiar with education in Shanghai suggest that the Shanghai system reflects a commitment to providing teachers with a true professional status and a desire to put teachers at the centre of the improvement process. The system allows teachers, not administrators, to lead the process of improving the curriculum and teaching methods and to work together as a team. The whole system is built on a truly professional model of teaching and teachers.

System-level changes would not be possible without strong government. The World Bank report (Liang et al., 2016) indicated that what differentiates Shanghai from many other education systems is a high degree of coherence between policy and implementation. No large divergence between policy statements and reality, as is witnessed in other systems, is readily observable. The exceptional connection between policy and implementation can be partly attributed to the cultural and historical Chinese characteristics of top-down and centralised control by government authorities.

We have reported elsewhere that it seems to be a mystery how a centralised education system such as Shanghai can produce relatively equitable student outcomes (Walker & Qian, 2018b). As implied in the traditional Chinese proverb *Fortune and misfortune are two buckets in a well (fuxihuosuofu, huoxifusuoyi)*, every event, every condition and every 'bit' is part of a larger whole. For a centralised and strong government, one bucket overflows with policy-driven standards, focused resources and skyhigh expectations—these appear to produce outstanding academic achievement on standardised tests. Another bucket from the centralisation well thus shows increasingly equitable outcomes. Centralisation is enacted within the traditional moral basis of governance—a paternalistic concern for everyone (Farh & Cheng, 2000; Walker & Qian, 2018a). Traditionally, rulers were assumed to be knowledgeable about and sympathetic towards the interests of all segments of society, not just the elite (Farh et al., 2008; Pye, 1991). Thus, leaders feel a moral and pragmatic obligation to

respond to societal and economic problems, and centralised power makes it possible for them to invest quickly and substantially to address these problems.

Different buckets dipped into the same well can pull up quite different loads. A centralised and strong government alone cannot overcome disparity and inequality in a relatively short time, as Shanghai has done. Conditions such as Chinese values, institutional structures and leadership styles interconnect and produce outcomes that are more than the sum of the parts (Tucker, 2014). This complexity necessitates more in-depth studies to holistically understand the system in Shanghai and throughout China.

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Haiyan Qian is an Associate Professor at the Department of Education Policy and Leadership and Director of The Joseph Lau Luen Hung Charitable Trust Asia Pacific Centre for Leadership and Change. Her main area of interest has been around school leadership in China and the influence of the social and cultural context on schooling across Chinese societies.

Allan Walker is Joseph Lau Chair Professor of International Educational Leadership and Codirector of the Asia Pacific Centre for Leadership and Change at The Education University of Hong Kong. Allan's research interests include the impact of culture on educational leadership and school organisation, school leadership in South East Asia, particularly China, leadership development, leading international schools and values and educational leadership.