

Shanghai Case Study: A Middle-tier Space to Support a High Performing School System

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Case Study for the IIEP-UNESCO and Education Development Trust Project Research Project 'Instructional leaders at the middle tier of education systems'.





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Abstract

This case study looks at the middle-tier space in Shanghai's education system, where high-performing instructional leaders are selected to implement national education reforms and spearhead innovative school practices across Shanghai's schools.

The role of middle-tier leaders is to empower teachers and headteachers by enabling classroom research, fostering their professional development, successfully adapting governmental education reforms in local schools, and sharing schools' best practices for scaling up. This is achieved through the exchange of ideas and the implementation of action-oriented projects.

This study highlights the importance of middle-tier leaders in making teachers and headteachers agents of change and overcoming resistance to education reforms. Backed up by a strong government and resource investment, they have helped establish Shanghai as a leader in education reforms in China.

Introduction

Chapter

1

1.1 Overview

Shanghai is a rising global metropolis in China. In recent years, its education system has attracted researchers' interest as a high performing system in teaching and learning (e.g. Tucker, 2014; Sato, 2017; Tan, 2013; 2017; Walker & Qian, 2018). For example, in the 2018 report of the OECD Teaching and Learning International Survey, 70 per cent of teachers reported participating in collaborative professional learning at least once a month, while the OECD average was just 20 per cent. Previous research on its education 'successes' has usually focused on selected aspects or the policy level. Few researchers have paid close attention to the institutional structures and resulting dynamics in the system.

Previous research on Shanghai's education 'successes' usually focused on selected aspects or the policy level. Few researchers have paid close attention to the institutional structures and resulting dynamics in the system. We would argue from our study that behind Shanghai's high performance is the power of a system, which has an empowering middle-tier as space or a professional fabric to connect government and schools, and to align policy and practice. This is also how Michael Fullan (2021) advocates "systemness is to systemic what coherence is to alignment" (pp.33-34). The middle-tier as key intermediaries to make coherence and alignment live are often overlooked.

What is the middle tier in Shanghai education? What do the middle-tier actors do, and how could they help achieve high quality teaching and learning? What barriers and innovations are evident? Empirical explorations of the Shanghai education system from the middle tier generate valuable contributions to policy-makers when considering boosting systemic capacity for educational changes and high quality teaching and learning.

Based on archive data, field interviews, and previous research in Chinese, this case study configures the middle tier in the Shanghai education system as a professional space between bureaucracy and schools, filled by three structural pillars of teaching research (Jiaoyan) system, teachers' educational research (Keyan) system, and in-service teacher training (Shixun) system, and three types of instructional leadership roles positioned in the respective systems.

The three intermediary professional pillar systems, actors positioned in the systems, and the fluid exchanges of ideas, practices, and talents constitute the middle-tier space in Shanghai. The study reports on the following typical intermediaries of the middle-tier space in Shanghai, whose impacts are closely related to teaching and learning. Institutional structures, routine work and featured projects of the three-layer pillar systems of teaching research, teachers' educational research and teacher training from the municipal level, to the district and the school. All three pillar systems are supported by recurrent public funding for routine work and fixed positions. Featured projects are supported by extra ad-hoc public funding.

This study will argue that behind Shanghai's high performance lies the power of a system which has an empowering middle-tier space. The middle-tier is a professional space that connects government (with its bureaucracy) and schools to align policy and practice. It is comprised of three structural pillar systems:

1. The teaching research pillar system (Jiaoyan) aims to improve teachers' classroom teaching by designating teaching research officers at various levels, to organize and lead group lesson observations and feedback. What is meant here by 'research' is the notion of studying together.

2. The teachers' educational research pillar system (Keyan) is based on the belief that every teacher can apply scientific methods to discover educational principles and solve their practical problems. Teachers' educational research officers coordinate and support research projects led by individual teachers and schools in their districts or on the municipal level. What is meant here by 'research', as

opposed to the first system, is enabling practitioners to conduct ‘action research’.

3. The teacher training pillar system (Shixun) provides professional learning opportunities beyond schools. The system has an advantage in selecting and pooling master-level outstanding teachers and principals, who are purposefully organized and supported to recruit and develop aspiring teachers in professional communities. In the near future, pillar systems 1 and 3 will be merged.

The three pillar systems were originated in Shanghai and developed along the local needs for high quality teachers and support for ongoing education reforms. Divided and specialized in distinct scopes of professional work, they have, in recent years, been converging by working on common projects. They have forged a powerful systemic instructional leadership beyond any individual schools, individual instructional leaders, or fragmented networks. Each pillar system encompasses fixed instructional leadership roles through which ideas can be exchanged, and projects can be built. To shed light on the 3 pillar systems, this study reports on two fixed roles and one featured project :

1. The teaching research officer (Jiaoyanyuan) in the teaching research system is a fixed full-time position at the district or municipal level, supported by recurrent public funding.

2. The educational research officer (Keyanyuan) in the teachers’ educational research system is a fixed full-time position at the district or municipal level supported by recurrent public funding.

3. Selected mentors named as ‘master principal’ or ‘master teacher’ in the ‘Master Studio Programme’ featured in this study as an example of the teacher training pillar system, are part-time roles filled by selected outstanding teachers, school principals, teaching research officers, and educational research officers. Mentors are not paid extra, but every master studio is provided extra ad-hoc public funding for professional learning activities.

This report analyzes Shanghai's middle-tier to help policy-makers consider how to boost systemic capacity for educational changes and high quality teaching and learning.

The authors of this report collected data not only on longstanding features but also on the roles that middle-tier leaders in Shanghai played in the educational response to the Covid-19 pandemic. In February 2020, the Shanghai government launched a top-down-designed online education solution for all primary and secondary students to learn at home during the pandemic lockdown. Within 40 days, a new and complete set of online teaching video systems was established as 'Class on Air' (*Kongzhong ketang* 空中课堂) to cover all teaching subjects from Grades 1 to 12 by 1,000 outstanding teachers plus over 200 technicians mobilized from the middle-tier. It became a showcase of centralized provision of "a pool of high quality resources for implementing large-scale distance learning" to support students at home (UNESCO IITE, 2020, P. 23). Without the strong and competent existing middle-tier structures and actors, this could not happen. Thus, in addition to wider observations, this report sheds light on the contribution of the middle tier in the emergency response for home learning during the Covid-19 crisis.

1.2 Research questions

Based on the IIEP-UNESCO and Education Development Trust study, the research questions for the Shanghai case study are framed as follows to explore how the unique structures and positions in the middle tier could enable high quality teaching and learning through structures and leaders.

- ✎ What is the middle-tier space, and who are the middle-tier professionals in Shanghai's education system?
- ✎ What roles do they play in supporting high quality teaching and learning? In what ways do they impact teaching and learning?
- ✎ How can the middle-tier space enable and support effective instructional leadership at large?

1.3 Data, methods and limitations

The research takes a qualitative approach. We reviewed policy documents and research published in Chinese, and solicited local experts' views before interviews. Data collection included:

- ∨ A desk review of research and archive data on the topic and policy background document
- ∨ Previous research in Chinese
- ∨ Semi-structured interviews and focus group discussions (FGDs) with:
 - 12 middle-tier officers (5 Jiaoyanyuan, 6 Keyanyuan, and 2 Shixunyuan¹);
 - 4 master teachers/principals running Master Studios;
 - 2 staff who are supporting and managing middle-tier officers;
 - 6 teachers working with middle-tier officers and master teachers/principals;
 - 3 staff involved in the design, recruitment, and training of officers/master teachers;
 - 2 retired decision-makers at upper levels in the education system;
 - 3 veteran scholars who have long researched jiaoyanyuan, master teacher and Shanghai education system.

1 Shixunyuan means teacher training officer. This is a new type of positions appeared in Shanghai system. Teaching training officer mainly works on organizing and researching teacher training in the municipal teacher training center and some district offices. As such positions are not yet adopted by all districts, we interviewed two to explore their responsibilities and impacts. We found their current impacts are peripheral, and decide not to focus on them in this report.

Table 1. Interviewees and interviews for Shanghai case

Category	Sub-categories	No.	By individual interview		By focus group discussion	
			Face-to-face	Online	Face-to-face	Online
Middle- tier officers	Jiaoyanyuan	5	1	2	2	
	Keyanyuan	6	3	3		
	Shixunyuan	1		1		
Master teachers/ principals		4				4
Teachers	Working with master teachers/principals	4				4
	Working with middle tier officers	2	1	1		
Staffs	Supporting and managing	2			2	
	Design, recruitment and training	3		1	2	
Decision-makers		2	2			
Scholars		3	1	2		

In total, we conducted 2 face-to-face focus group discussions (FGD) with staff and keyanyuan, and 2 online focus group discussions with master teachers/principals and their mentees.

Table 2. Focus groups in Shanghai case

1 st FGD	1 supporting staff and 1 design staff (face-to-face)
2 nd FGD	1 recruitment staff, 1 supporting staff, and 2 keyanyuans (face-to-face)
3 rd FGD	1 master principal, 1 master teacher and 2 teachers working with them (online)
4 th FGD	1 master principal and 1 teacher (online)
5 th FGD	1 master teacher and 1 teacher (online)

Despite the constraints of tight scheduling, traveling distance, and the restrictive school policy on Covid-19 prevention during the time when Shanghai had some small-scale outbreaks in late December 2020 and January 2021, researchers managed to meet face-to-face with 14 individual interviewees and conduct online meetings with 18 interviewees.

Each individual interview took at least 60 minutes, and the longest was 4 hours. The four-hour interview was conducted with experienced district-level teaching research officers on Physics in senior high school (JYY-1). The average duration was around 100 minutes. We used oral consent to notify participants about the background, purpose, and content of the research. We informed them about the fair usage of the data and the rule of participant protection. Interviewees were told they were free to stop the interview or discussion, but no one requested that. Following findings came from triangulation and synthesis of data available, especially with expert knowledge from three veteran scholars in Shanghai. Interview quotes are used to present their authentic voices.

All interviews were conducted in Mandarin Chinese, and all the audio and video records were transcribed. Quotes in the report are translations by the research team. We tried to maintain the authentic flavor of the Chinese narratives.

The Shanghai education system
and the middle-tier space

Chapter **2**

2.1 Historical context

Figure 1. 16 Districts in Shanghai



Shanghai is a global metropolitan city with more than 24,281,000 residents. There are 16 administrative districts under the municipal government. According to Shanghai Education Statistics of 2020, in 2019, there were 842 regular secondary schools and 698 primary schools, with 1.43 million students and 121.2 thousand teachers. Pudong district is the largest. The fixed positions of the middle-tier actors have reached approximately 1,400. The ratio of the full-time middle-tier actors to teachers is over 1 per cent in the whole system. According to a senior official we interviewed, Shanghai's education success lies in keeping 1% to 3%, the 'best' range of the ratio, of the middle-tier actors to teachers in Shanghai.

Shanghai education is at the forefront of education reforms in China. It is the first pioneering municipal education system allowed to experiment curriculum reforms. Education in Shanghai has been strategically prioritized when the municipal government considered the development orientation of Shanghai as China's first and largest international city in the 1980s.

Shanghai's government initiated the idea of reforming the schooling structure and curriculum in the 1980s with a forward-looking talent plan for the 21st century. In 1988, the National Meeting on Textbook Planning Management approved the Shanghai reform initiative. As an economically developed region at that time, Shanghai obtained a rare experimental opportunity for curriculum reform which no other region in China had. This was called the First-phase Curriculum Reform (Yiqi Kegai). In the first phase of curriculum reform, Shanghai took the lead in cultivating student quality and developing student personality. As a result, the national unified curriculum was restructured into three types of curriculum as mandatory courses, elective courses, and activity courses. This change was 'revolutionary'. No previous experiences could be borrowed or relied on. According to Mr. Zhang Minsheng (2018), then-director of the Shanghai Municipal Education Commission, the leadership soon realized that this reform could not be successful without the participation of teachers and changes in their pedagogical practices. Holding such a grounded understanding of changing teachers for reform imperatives, Shanghai has gradually established a unique but well-functioned three-layer administrative-professional structure focusing on developing teachers and improving their practices.

In 2014, Shanghai was selected as one of two national experiment cases of comprehensive and systematic education reform in China. Yangpu District in Shanghai was chosen as one of the national experimental zones for senior high school curriculum reform. These ongoing, experimental, and exploratory reform initiatives have geared the Shanghai system on an extraordinary path to test and lead education changes. Teachers and principals took changes as a norm and opportunity rather than unwelcomed disruption. The ongoing reform process also resulted in a gradually developed systemic mindset to face changes and an

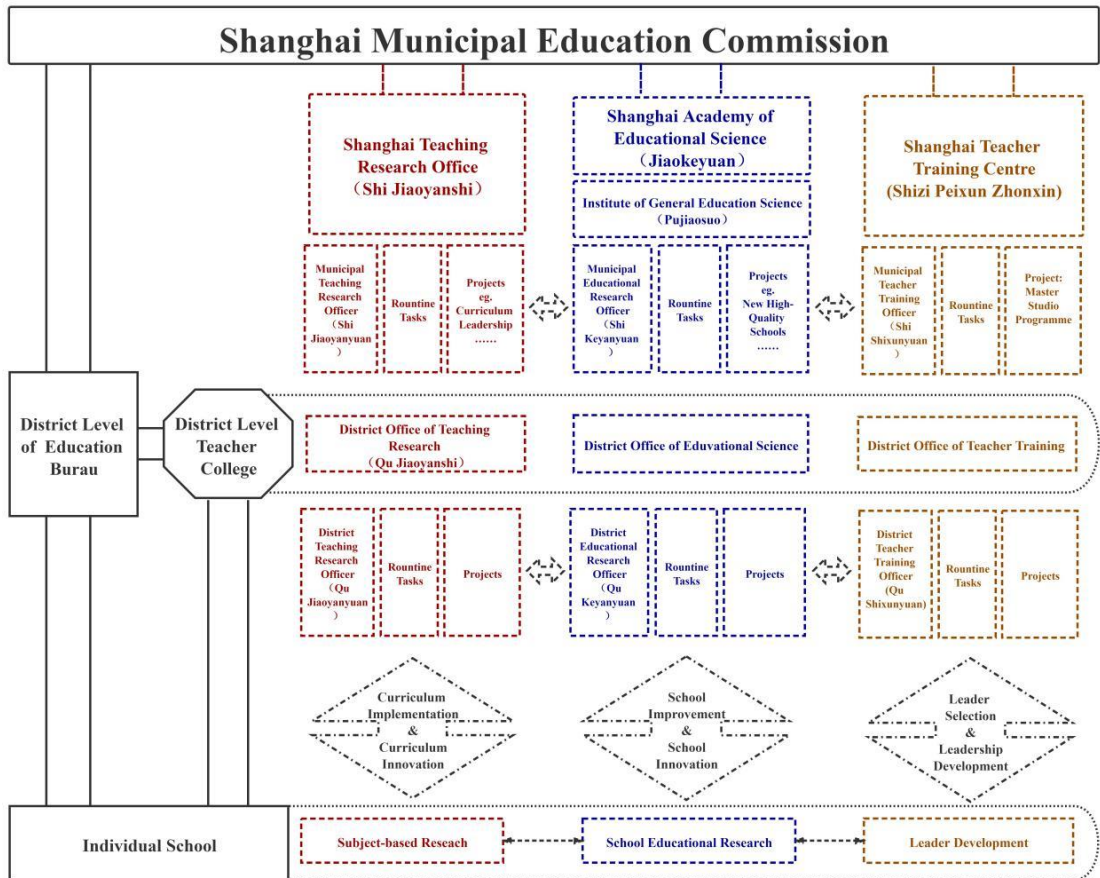
institutionalized structure to ride changes. Among the middle-tier actors we interviewed, we could barely feel any reservation or resistance to education reforms. However, we detected from our interviews that ongoing reforms and top-up projects from three professional systems had generated work-training tension (gongxue maodun) and reform fatigue.

2.2 Overview of the official professional pillar systems and the middle-tier space

Shanghai Municipal Education Commission is the municipal-level education authority in Shanghai. Every district establishes a corresponding education bureau. Along with bureaucratic education administration in Shanghai, there exists a three-level official professional structure that forms a chain of professional advisement and leadership from the municipal level down to the school via the district, as illustrated in *Figure 1*.

Under the Shanghai Municipal Education Commission, there exist official professional organizations to support corresponding departments on teaching, teacher research, in-service teacher/principal training, student development, education technology, etc. The Municipal Teaching Research Office (Jiaoyanshi), Institute of General Education Science (Pujiaosuo), and Shanghai Teacher Training Center (Shizi Peixun Zhongxin) are leading the three professional pillar systems, which specialized respectively in teaching and curriculum, practitioner's educational research, and in-service teacher and leader development.

Figure 2. Intermediary professional pillar systems and actors in Shanghai’s middle-tier space



Source: Authors’ own, 2022

Note: The black boxes and lines represent bureaucratic lines of education authorities from the municipal level to schools; the coloured boxes and lines refer to professional systems and practices led by the three pillar system organizations.

Starting from the municipal level, the following three organizations are leading the three pillar systems:

1.The Municipal Teaching Research office, shown in red, encompasses district offices of teaching research and is made up of teaching research officers on the municipal and district levels. This organization specializes in facilitating,

coordinating, and leading professional discussions of subject teaching and projects to improve it.

The Institute of General Education Science, shown in blue, covers district offices of practitioners' educational research, with educational research officers positioned on the municipal and district levels. This organization focuses on promoting and supporting practitioners' research projects to solve practical problems and to distil grounded experiences.

The Shanghai Teacher Training Centre, shown in brown, indicates district offices of in-service teacher training, and is made up of teacher training officers and their signature Master Studio Programme. This organization features a tested professional community programme to provide studio-based learning opportunities by master teachers and principals to the selected mentees.

Down to the district level, the District Education College designs, leads and supports district teacher development and school improvement. Funded by the district and administered by the District Education Bureau, it establishes district-level offices that correspond to the municipal professional organizations, namely the district teaching research office, district educational research office, and district teacher training office.

Finally, at the school level, school directors are assigned to work routinely along the respective district offices on teaching, research, teacher development, etc. When a school joins municipal projects, the principal, directors, and regular teachers can work directly with municipal middle-tier actors beyond the district. Schools don't have to pay for services or programmes provided by professional organizations, and they can also choose to work with researchers and consultants outside of the three pillar systems.

The middle-tier space

Through these systems, the middle-tier takes shape as a professional ‘third space’ (Tsui and Wong, 2010) located between the government and schools, which can be assimilated into a weaving fabric. The middle-tier space can be conceived dynamically as a multi-dimensional weaving fabric:

- ∟ The three pillar systems and their full-time formalized positions of actors as longitudinal warp.
- ∟ Fluid practice in the forms of projects and exchanges (workshops, seminars, policy forums, symposiums, etc.) as the transverse weft. Projects pave way for the independent trial-and-error by schools and teachers. The formal and informal exchange created a platform for the school-based adventures to be demonstrated and seen by middle-tier leaders. It is in the exchange that middle-tier leaders discover, evaluate, and identify valuable reform practices by schools and teachers.
- ∟ Leaders move in the space. First, outstanding full-time teaching research officers and educational research officers are offered part-time mentor roles in the Master Studio Programme. Middle-tier instructional leaders, full-time or part-time, are usually invited by projects to provide comments and advice in professional workshops, seminars, and symposiums. Outstanding master teachers or teaching research officers could also be appointed as school principals. Second, there exists a ‘revolving door’ of education leaders in Shanghai. For example, the current director of the Shanghai Municipal Teaching Research Office was promoted from an outstanding principal at a leading middle school. His successor in this school was a special-ranked history teacher whose previous positions ranged from a school vice principal, vice director of P District Bureau of Education, and vice director of the Department of Basic Education in Shanghai Municipal Education Commission.

Pillar system 1: the Teaching Research System and Teaching Research Officer

According to research on China's teaching research system by Hu (2019), Shanghai Teaching Research Office, established in 1949, is the first teaching research institute in China. At the time, teacher education was just taking shape, schooling suffered from the lack of qualified teachers. Most teachers were weak in theories and green in practice. There was a huge gap between teacher competence and school needs and requirements. The quality of schooling was thus worrying as teachers were unable to achieve curriculum objectives. Teaching research played a crucial role in filling in the gap. Qualified and experienced teachers were selected as teaching researchers to lead, supervise, and train teachers, while school-based teaching research was carried out as a daily or weekly routine for improving teaching collaboratively. Teaching research becomes a continuation of teacher education for novice teachers. Teachers developed professionally by sharing and solving problems and challenges with peers and teaching researchers.

Shanghai Teaching Research Office works under the Shanghai Municipal Education Commission as an independently operated but public-funded non-bureaucratic professional organization. It works closely with the Department of Basic Education.

In general, there are two types of teaching research officers, divided by subjects and integrated subjects. They are positioned at the municipal and district levels. Therefore they are named municipal teaching research officers and district teaching research officers. They serve different levels of schooling as kindergarten, primary, junior high, and senior high levels.

By responsibilities, their work cover research, advisement, and service in curriculum, teaching, and assessment in different subjects and at varied schooling levels. They are responsible for organizing district-level or municipal level teaching research activities, and also designing student assessments, and producing assessment reports to administrators and principals.

To take JYY-1 as an example, she is an experienced teaching research officer and is tasked with demonstrating her roles in regular school lesson observations and feedback to school leaders, organizing teaching research activities open to all district high school Physics teachers, developing mock examination papers for the college-entrance examination, and writing textbooks.

Routine work

- ∨ Organize subject teaching research activities. The teaching research officer is required to observe at least 30 lessons in every school term, and organize at least two open teaching research seminars. The form of the open teaching research seminar is to invite a teacher to openly and fully demonstrate a real lesson of class students to their colleagues. The open lesson has been prepared, shaped, and refined under close supervision and guidance of the teaching research officer. Junior teacher is required to write down a complete lesson plan, word-by-word, in the lesson. The purpose of choosing the teacher and the open lesson is to demonstrate a real example of new pedagogical practice. “For example, how to teach core competence in the high school Physics class? I will invite all district Physics teachers to observe, comment, and evaluate the well-prepared open lesson. By discussions and my comments, teachers, especially the junior teachers, will get my points, and they like this kind of teaching research activities very much.”(JYY-1)
- ∨ Prepare student assessments and feedback. Every teaching research officer organizes at least one teaching and learning survey in the form of student assessments. The form of assessment varies largely from the paper-pencil examination. For example, in the subject of safety education, the teaching research officer in Jinshan district (JYY-3) designed a field test, inviting 10 randomly selected students from every school to visit a field of potential

mock safety issues. Teaching research officers observed students' reaction and treatment, and produced a final assessment report for the district bureau and school principals.

- ↳ Develop high-quality textbooks and teaching resources. Teaching research officers are regarded as bridging professionals between curriculum standards. They are missioned to translate and transfer the curriculum standards from paper to every frontline teachers' professional implementation and innovative practices in every class to every student. As such, developing high-quality textbooks and teaching materials is essential to their work.

"We, teaching research officers, know far better than regular teachers and scholars about the gaps between curriculum standards, textbooks, teachers' use, and student learning." (JYY-1)

Career and development

- ↳ Experienced teachers and fresh master and doctoral graduates are the two major candidates for teaching research officers. To take one district job advertisement as an example, either senior-ranked teachers or fresh Ph.D.s in education can apply for the position of district teaching research officer. Applicants should go through a paper examination of education theory and expert interviews.
- ↳ Teaching research officers are not offered specialized training. They usually develop themselves in the way of 'learning by doing.' Their promotion is based on their annual performance, advisement, research projects, and publications, which are shared by regular teachers.

Pillar system 2: the Educational Research System and Educational Research Officer

The general educational research system in Shanghai is unique. It was based on a simple belief that every teacher in Shanghai should and can do educational research grounded in their practice and developed for their practice (Zhang, 1994). In the early 1980s, education leaders in Shanghai were so determined to promote grassroots educational research and to establish the educational research system (Keyan) from the municipal level to district and schools. When Shanghai launched the Second-phase Curriculum Reform (Erqi Kegai) before entering the 21st century, bringing in the experiences and reflections from the First-phase Curriculum Reform, the educational research system and some leading educational research officers played a key role in exploring and experimenting with the new reform (Zhang, 2015).

At this stage, themes and goals were oriented towards the student learning experience, centering on student development, moral and value education. Changing the ways of learning style was set as a practical leverage for cultivating students' innovative spirit and hands-on capability. Curriculum integration was promoted to enhance the inherent connections and associations among different subjects. These ideas looked unsurprising today, but at that time, a senior Keyanyuan (teachers' research officer) who experienced the Second-phase Curriculum Reform noted in the interview, "no one has any clue in the beginning; how to change, what is called learning style change, and how to implement from ideas in the practice" (KYY-6). But later on, under his leadership, a primary school successfully discovered a school-based curriculum integration plan as the result of their school educational research project.

Routine work

↳ Organize and guide teachers' research project. Teachers and principals can apply for national, municipal, and district educational research projects.

Educational research officers are responsible for disseminating the call, organizing and mentoring applications. Once projects are approved, educational research officers will oversee the process, offer timely support, organize mid-term report workshops, and support submission. In every district, usually, 6-8 educational research officers are positioned to cover different schooling levels and types.

- ✎ Advise and support school-based improvement or reform projects. Educational research officers regard themselves as different from teaching research officers and as ‘less authoritative to teachers (JYY-2). “We are teachers’ professional partners. We ask questions with them; we offer companionship to them on the path of educational reform.”(JYY-2) School principals usually have much fewer contacts with teaching research officers than educational research officers.
- ✎ Collect, distill and promote tested educational experiences. Educational researcher officers are missioned to collect, distill and promote experimental experiences. Writing articles, editing books, and presenting exemplary cases in seminars and policy background papers are the formalized approach to make the experiences visible and reachable. There is also one unique form of distilling and promoting, which is the site-based symposium (xianchanghui). Experts, administrators, policy-makers, and other school colleagues from Shanghai and out of Shanghai are to be invited to witness how the school presents its case of school reform and its real impact. This is also the occasion to promote educational experiences into policy or disseminate them to other contexts.

Career and development

As for the specific requirement of understanding and undertaking educational research, research-degree holders are prioritized in admission. Recently in some districts, fresh Ph.D. graduates in education are admitted. However, given the small number of such positions and specific skills and competence, there are no

particular job training or organized development opportunities. “We have to all rely on ourselves,” one educational research officer made this comments in the interview. In an internal policy background paper we joined, professional development and career advancement are the major barriers to educational research officers.

Pillar system 3: the example of the Master Studio Programme

The programme was initiated in 2005 by the Task Force Office of Teacher Professional Development in Shanghai Municipal Education Commission and Shanghai Teacher Training Center. By now, it has undertaken four cohorts, and each cohort lasts 3-5 years, involving 530 principals and 3,200 teachers by now. Such programmes aim at selecting and cultivating high-level instructional leaders in the forms of lecture-based learning and professional learning communities.

As shown in Table 3, the Shanghai Teacher Training Center is responsible for inviting experts to plan, advise and review the programmes. A nominated liaison in every studio is responsible for communicating regularly with the Center on project progress and experiences achieved. District-level teacher training offices manage and support the studio members in their district. This also builds up the connections between the studios with their district members. Schools involved in the programme provide the venue and other resources supporting the studio activities. The school workload of the studio members will also be alleviated accordingly. For example, school principals of the studio members are strongly suggested to cut teaching loads and allow one-day development leave every week to support the members’ studio learning.

One member commented on the impact of the Master Studio as that “the selected master teachers and principals are outstanding and their achievements are phenomenal; regular teachers and principals look forward to join the Master

Studio Programme as an honor, opportunity, and a learning platform. I personally benefited a lot from the studio". (MS-T2)

Table 3. Structure and Learning Activities in the Master Studio Programme

Three-level structure	Municipal level	<ul style="list-style-type: none"> • Strategic plan and central funding from the Task Force Office of Teacher Professional Development in Shanghai Municipal Education Commission • Management, coordination, and supporting service by Shanghai Teacher Training Center • Studio liaison reports and communicates with the Center
	District level	<ul style="list-style-type: none"> • Manage and support district members by District Education Bureaus and District Teacher Schools • Nurturing district level pool of potential instructional leaders
	School level	<ul style="list-style-type: none"> • Provide venue and resources for the studio school-based activities • Reduce workload of the members
Entry	<ul style="list-style-type: none"> • Chairs are selected experienced master teachers, master principals or outstanding members from the last programme. • Members apply voluntarily and are selected by the chairs (Junior teachers have opportunities but most are aspiring instructional leaders) 	
Professional learning activities of the studio	Under the leadership of the chair and shared learning goals	<ul style="list-style-type: none"> • Shared professional interests of the chair and members • Goal-oriented, problem-solving-focused task-driven professional learning • Plan-implementation-outcome-report • Learning activities around project research, open lecture, forum discussion, teaching demonstration, lesson study, mentoring new members, publications (journal article and monographs)

The programme is experimental in nature, adjusting the form and scale with the available funding and goals. Currently, the fourth cohort is on the way. From table 4, the formal class lecture mode was no longer adopted. Professional learning communities in the form of studios are advocated.

Studio chaired by master teachers and principals is favored. Around 9 members constitute a Master Studio. Members apply voluntarily and are selected by the studio chair on their professional passion and background. They usually meet twice a month, half a day, or a whole day for each meeting. Studio learning activities include project research, open lecture, forum discussion, teaching demonstration, mentoring new members, and publications (journal articles and monographs). With nominated schools as the venue for studio activities, the master studio also becomes a learning and demonstration platform for wider audience, communicating the learning outcomes and spreading achievements.

One Master Studio chair described their studio activities as follows, “the studio is responsible for high-level teacher training. Every studio meets regularly around some focused themes. Our studio met on Tuesday every two weeks, a whole day meeting. This is fixed. For other activities, like writing monographs or making videos as our studio learning outcomes, we could only use our spare time.” (MS-C1)

Table 4. Shanghai Master Studio Programme

		First Cohort (2005-2007)	Second Cohort (2008-2010)	Third Cohort (2012-2017)	Forth Cohort (2018-2021)
Duration (years)		2	3	5	3
Master Principal Studios	Studios	8	11	13	17
	Chairs	8	18	24	17
	Members	100	130	136	169
Master Teacher Studios	Studios	23	45	50	92
	Chairs	24	66	81	92
	Members	319	563	682	878
Advanced Learning Classes	Master principal classes	4	1	2	0
	Master teacher classes	22	0	0	0
	Members	560	30	65	0

Impact from practice to practice. Members enrolled in the Master Studio are usually enlisted in the pool of instructional leader candidates at the district and municipal levels. Studio experiences will be a plus for their professional rank advancement and career promotion. Despite personal rewards, they would also take their learning back to school. For example, an English teacher in a Master Studio brought back to their district the latest English curriculum reform goals and solutions, which forms a knowledge edge over their district teaching research officer. She offered subsequent workshops for the district teachers on the new knowledge. However, other teacher informants held different experiences with this member. One teacher shared her experiences and observations that 'all depends on the school principal'. Although she felt learning at the Master Studio was useful, she would not feel like sharing with colleagues if not requested by her principal. So the dissemination of new knowledge didn't happen easily.

Impacts

Chapter 3

3.1 The middle-tier space for transfer of policy into practice

As mentioned above, Shanghai is the incubator and laboratory of education reforms in China. When change has become the norm, how can schools and teachers be supported to enact new policies and embrace the meaning of reforms at every swing? The middle-tier space plays a significant role in the transfer of government policy into practice in schools. Middle-tier leaders are the translators and interpreters of policies, and advisers and supporters to schools and teachers. The middle-tier space serves as a resource pool and a collaborative platform to which schools and teachers can constantly turn for support. The space is also a buffer where resistance and tensions are moderated, where the conflicts are negotiated, and where the spirit of change is accepted and internalized.

Planting the seeds: model curriculum development in the middle-tier space

When the Municipal Education Commission initiates a reform in which few schools and teachers in Shanghai have practical experience. Rather than imposing the policy on all schools and teachers in a top-down manner, the enactment usually starts with small-scale collaborative work of expert teachers and/or school leaders under the leadership of middle-tier leaders in the pilot district(s). Taking safety education as an example, the middle-tier leaders at the district level communicated with the policy-makers to understand the policy and received training at the municipal level. Then they returned to their districts to select and gather together a group of master teachers from pilot schools for collaborative curriculum design.

Elaborating, in 2013, the national government released a guiding policy to strengthen

public safety education in middle and primary schools. Shanghai JYY-C participated in the training organized by the municipal government on the Shanghai guidelines, and then returned to his district to lead the pilot.



“As I communicated with the two pilot schools we selected, I first told them that this was *essential* and gave them *two options*: 1) we could choose not to do it, but to follow and learn from other schools which chose to be the pilot sites when they had succeeded. *I could help them observe and learn* from those who had led the way. 2) we could choose to do it first (to lead), and when we had done it well, others would learn from and follow us. This required hard work, I added, but we could achieve with outcomes. They said they wanted to do it, but they did not know how to do it. *I told them, ‘It is fine. I will do it with you.’*” (JYY-C)

Following this, JYY-C thought over the research design of the project and planned the implementation steps with agreement from participating teachers in the two pilot schools. Before turning directly to curriculum design, JYY led the team to interpret and translate municipal guidelines into a draft action plan, which would not only be the basis for the pilot project but would also be improved during the pilot to become the implementation guidelines for all schools in the district.



“The teacher-leaders in charge were very serious and committed. We started with a workshop to discuss the guidelines for implementation by the municipal government policy, sorting out its main content. Then we arranged every piece of content and sorted out every point. After that, we formed a preliminary implementation outline of the guidelines in Jinshan District” (JYY-C)

Next, JJY worked with the teachers in the two pilot schools to design, implement and improve the safety education curriculum and the implementation guidance. Following success in the two pilot schools, they nurtured the products: curricula, teachers, and a refined action plan tested and informed by practice. The work resulted not only in implementation guidance to follow and model curricula to imitate and from which to learn. More importantly, it created a toolkit of curriculum resources to be shared with all schools in the district. The participating teachers became the seed teachers, who continued the exploration of safety education, mentored other teachers, and led the enactment in their respective schools. Teachers acting in the middle-tier became the seeds for the germination, growth, and blossoming of practice in their own and other schools (which came to learn from them). They also developed as potential candidates for middle-tier leadership.

Another example with a slightly different trajectory was the reform on an integrated curriculum led by KYY in the form of a project in the first phase of the experiment. As the project progressed, JJY was also heavily involved in collaborative leadership.

To carry out a project in the Xuhui experimental area for educational reforms (to implement the new national curriculum), KYY-Z built a team in 2003 in an ordinary suburban institution, Meilong Primary School. She started experimenting with a new curriculum implementation mechanism in the first round, which lasted three years.

This was an example of project-driven change in schools. As KYY-Z put it,

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“We did not know whether it would work, how it could work, and what it would mean for teachers. We turned the reform needs into projects, and then we used projects to promote and lead reforms. We had to experiment and pilot first. We used the projects to investigate and discover rules (the theory for practice) and approaches to reform. With that knowledge, we improved and expanded our practice to move the reform forward.”

However, the start was full of challenges, especially at the initial stage of the first round. Some strong schools felt overwhelmed with too many projects and refused to join. The benefit, ironically, was that it gave a chance to a relatively weak school with motivated teachers and principals. As explained by the KYY-Z,



“I first tried to invite a few strong schools in X District for the pilot, but the principals said no. At the time Director Y, who had taught Mathematics for many years and had collaborated with me previously on reforms, was appointed as the principal of a new primary school located just next to us, in a rural-urban continuum. Then I secured collaboration with him.

We launched in the second half of 2003. Then at the end of 2003, the winter holiday, we recruited volunteers by posting a notice on the school bulletin board stating that the school was going to initiate a key curriculum and would like to recruit teachers to develop their teaching potential. I feared that the teachers would have no interest, but young teachers came, the backbone teachers came, and some old teachers also came. Asked why, they said, ‘We also want progress and development. If the principal leads us to do it, why do we miss the chance?’

During the winter holiday, the team completed the implementation guidelines of over 100,000 words with collective effort. It was very powerful. The guidelines included all subjects, within each subject, by grade.”

When teachers had difficulty in the process, KYY-Z helped.



“Since one semester followed one set of guidelines, we conducted the experiment for a semester. As it lasted till the first half of 2004, teachers were very active and felt that they were getting on very well, and teaching became smoother, unlike in the beginning. In the beginning, they went over it again and again but failed to understand it. So I tried to figure it out and then teach them, following which they understood. With this understanding, they became better and better at doing.”

Scaling up at the district level: middle-tier space as the safety net, think tank and resource pool

The practice described above has turned abstract policies into stepping stones (e.g., feasible action plans and ready-to-use curriculum toolkit) for schools and teachers. Yet, enactment in various schools encounters challenges beyond what the stepping stones can offer. Whenever there is a need for external support, schools can turn to the middle tier for guidance, resources, and the exchange of experience with other schools and other districts. In the process, middle-tier leadership became part of the flow of actors: middle-tier leaders from the middle-tier space to schools (to supervise, support, evaluate (assessment for reflection and improvement, as well as for identifying best practices) and tackle obstacles and challenges together), and school teachers and managers to the middle-tier space (for training, supervision, sharing, learning, and demonstrating).

In the case of safety education, following success in the two pilot schools, the JYY brought with him the results to mobilize the district leadership for

scaling up. A publicity conference was used as a prelude to the scaling up of the reform. It was held for two main purposes: 1) to share the experience in the real school context and 2) to raise awareness that the reform could be implemented. The former was important for the exchange of experiences. The latter was symbolic since it sent a signal to those who doubted whether the policy was realistic or who resisted implementing the reform that it could be put into practice. To some extent, it also created peer pressure by showing that the two pilot schools had done well, and thus set the precedent:



“One year later, we completed the guidelines and created several classroom cases. Then I mobilized the district, telling them that a promotion conference should be held on this. Now that the results of the two pilot schools had come out, we needed all schools to implement it next year, so we needed publicity. On 5 June 2014, a significant publicity conference was opened to the whole municipality and district. We also invited the president of the Red Cross from Jinshan District, the director of the Education Commission, and the head of our college to the conference. They all participated, which made a great impact. This set the prelude to the comprehensive implementation of public safety education.” (JYY - C)

In the second year, JYY-C formed a JYY team to evaluate the progress. They randomly selected students from each pilot school. The test started once the teachers had escorted the selected students to the carefully designed setting and left. The knowledge test only followed the observation and evaluation of students dealing with real-life safety hazards. The research findings indicated that all students performed rather well in the

safety knowledge test (except for four Bs, all students got A). However, for the real-life scenario test, they either got C or D. They reported the research findings to schools, helped them diagnose problems, and guided them for improvement:



“That is to say, the problem was serious. According to the findings, the core of public safety education has not been implemented, it was taught as an academic subject for students to understand the concepts and recite the fact. It was like even if they understood all the signals of the traffic light, they did not follow them when crossing the road. Then we wrote research reports and showed them to schools to explain which direction we should follow. We also asked the school to improve their planning and went through each point to be tackled. Secondly, we also emphasized that we should pay great attention to practical training in the implementation.”

In the case of the integrated curriculum reform, the pilot school’s performance was greatly improved during the first round. KYY, who specialized in the subject, observed the class and made a positive evaluation of the high teacher motivation and engagement, and the continuous improvement of student academic achievement was evidence of the effectiveness of the reform experiment. As the pilot school’s performance jumped considerably above many other schools, the success of the pilot reform attracted more schools and secured more resources for scaling up. Thus the second round of experiments was launched in 2006 with the voluntary participation of 22 primary and secondary schools in X District. It covered all the basic subjects and again was considered successful.

The third round of experiments through the voluntary registration of schools was launched in 2008 with 46 primary and secondary schools in X District. In this round, most X District KYs and JYs volunteered to lead the teachers to carry out the experimental research. During this round, the new national curriculum was generally implemented in the whole district. The experiment of teaching reform both enacted the curriculum reform and also improved student academic performance. It also reduced their study load.

In addition to internal resources from the middle-tier space, middle-tier leaders mobilized and channeled external resources such as experts from universities and funding through application for government projects.



“We provided a training program for principals to equip them with the theory and methods needed for curriculum integration before they started. At the same time, we trained teachers involved in the experiments and invited policy-makers and experts to interpret the cutting-edge ideas and trends of education reforms. We also trained teachers in the methods for the development of curriculum-integration guidelines and the development of the teaching and research group in the school.”(KYY-Z)

For relatively weak schools that lacked sufficient resources and capacity, the middle-tier space was a safety net for support and quality assurance.



“We (KYY) often held meetings for the principals to understand the progress of the experiment. We frequently visited the schools to work with the teachers to discuss and give guidance. We organized symposiums and workshops to share the abundant experience we had extracted from all pilot schools. We arranged for the senior JYs, senior KYYs, and external experts to visit the schools, to observe and comment (for their progress to be seen and for them to get professional guidance).”

Thus, when the integrated curriculum was enacted in schools, it continued in the form of co-construction by teachers and middle-tier leaders. They developed a school-based curriculum and evaluated and improved it. Leading, learning, and researching, middle-tier researchers extracted experiences that were then turned into best practices to be shared at the municipal level and beyond.

One salient example of the middle tier being the safety net for weak schools and teachers was the 'Air class' (virtual schooling during Covid-19) and the use of digital resources generated by the Air class in the post-Covid present to support suburban schools and teachers. In response to school disruption by Covid-19, middle-tier leaders (JYY, KYY, and Master teachers) who were outstanding experts in subject teaching immediately collaborated to conduct teaching research, and to plan, design, and record video classes to provide virtual schooling to all students. Schooling took the form of a dual-teacher model. The first half of the class was taught by the expert leader online, supplemented by tailor-made teaching by students' own subject teachers. The model mobilized the best teaching resources and highly collaborative work by almost all the best middle-tier leaders. This greatly elevated teacher digital

competencies and school digital infrastructure. The emergency measures secured the progress of all students in Shanghai until the end of the school closure. In the post-Covid era, digital resources have been most frequently used by suburban schools. KYY-S shared her and her colleagues' experience of helping teachers in these schools to utilize the recorded classed and related materials to improve their own teaching:

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“During and after school closure, I think it was a good idea to organize a group of teachers to watch these recorded Air classes and then list what viewers felt was the best part, for example, which second to which second of which class, which section of the video was about what theme, etc. We worked with teachers to produce a list of key sections of the recorded class, linking them to the specific curriculum content. Then when teachers were teaching a theme, they could say, ‘I want my students to watch this link and reflect on this. I have a library of digital resources, and I'm associating this video with this knowledge point and the teaching of that to solve those problems’.”

Scaling up at the municipal level and beyond: middle-tier leaders as messengers and mobile consultants

If the first stage of model curriculum development was a commitment to transfer abstract policy into the model curriculum, the middle tier's research in stage two was an effort to conceptualize the scattered and context-dependent school-based curriculum development into more general frameworks, methods, and curriculum resources that could be developed and shared with other districts in Shanghai and beyond.

Following stage two, once the pilot enactment of the reform initiative had been evaluated and proven successful it produced fruits (curriculum toolkits, trained teachers and leaders, and extracted experience) ready to be shared. Middle-tier leaders in the district worked closely with their peers at the municipal level and in other districts to spread seeds. In the process, they engineered the expansion of integrated curriculum in all schools in Shanghai.

In the case of safety education, the JYY in J District was invited to lead a central teaching research group at the municipal level. The goal was to continue extracting and conceptualizing the Jinshan experience, and to identify what could be shared practically for scaling up in other districts. The extracted and transferable experiences were formalized as official documents (model curriculum planning) and institutional change (creation of teaching-research teams on public safety) in the middle tier and schools of all districts.



“So why did I actually push that? I found out from the research on implementation that there is such a direction. So later, the municipal government felt that this was important. They set up a specialized teaching and research group at the municipal level and made me responsible for its operation. Then I extracted the J District experience and identified lessons for the various districts and counties. One focus was how to make the school safety plan. In 2019, the Department for the Protection of Children and Young People (DPCYP) sent the model for public safety education planning that we had developed (including how to create the plan and what to include) as an official document to all schools, requiring them to set up teaching research teams on the subject.” (JYY - C)

Later, the Jiaoyanshi required that each district/county was required to host a JYY specialized in public safety. As such, the DPCYP and Jiaoyanshi at the municipal level jointly urged the formation of teaching research teams on this in all districts and schools.

Both stages two and three of scaling up were, in nature, transferring practice to practice. Experience from the pilot schools and districts embodied the contexts of the schools and districts where the reform took place. Experiences, albeit conceptualized through teaching/teacher research, could not be copy-pasted to schools and districts of different contexts. Aware that “experience could be shared, but not taken”, middle-tier leaders did not stop sharing experience in words in publications, training workshops, or seminars. Rather, they did it in action as well. They travelled from where the seeds were initially planted, and fruits were grown in other districts and schools so that the transfer of experience could be grounded in the context. They interpreted for the new actors in practice and led them to tailor-make solutions to challenges and obstacles.

In the case of safety education, for example, JYY-C was invited by other districts for training and supervision in schools.



“B District has been doing very well in such activities, they do need it. They have called me to go to Baoshan to train leaders responsible for safety education and to interpret the Shanghai guidelines. I think a lot of teachers need help understanding the document. For example, for the interpretation of curriculum standards, how to implement them into teaching design, and how to put them into practice? It could be adjusted. In teaching, however, teachers still have a bit of difficulty. Therefore, in the process of curriculum implementation in our group, we also re-organized, re-defined, and re-explained the goals so that the teachers were clearer.”(JYY - C)

Similar patterns were evident in the other case of the integrated curriculum. As the success in X became well known by leaders at the municipal level and by other provinces, the experience and resources were followed by schools elsewhere.



“All the schools in the suburban Shanghai districts knew about it. They learned from us and carried it out spontaneously. For example, Songjiang imitated us at every step, and the school quality rose. Pudong, Songjiang, Minhang, Jiading, and Zhabei Districts have learned and launched their own experimental research. The experiment was also carried out on a pilot basis in sibling provinces, such as Hainan and Qinghai.”

Nurturing a change mindset: middle-tier space as the buffer between policy and practice

At all stages, middle-tier leaders played a key role in supporting schools and teachers to develop the integrated curriculum as a collective effort. They travelled between schools, districts, and even cities (when other cities learned from Shanghai and when the Shanghai initiative became the national initiative) to introduce best practices and to provide consultancies for adjustment of experience from one place to fit the soil in another. For any teachers or schools involved in the reform with reservation or resistance, it was a shared burden with middle-tier leaders, who would not only be there to guide and support but also, to some extent, to open their eyes to the meaning of the reform.

Elaborating, the presence of middle-tier leaders in schools, and

their support and leadership for teachers, had an important symbolic function. They showed the commitment of the government, and the care and support from the policy-makers to make change happen. It turned what could have been considered a burden by some resistant teachers into a collective enterprise and aspiration to change for the better. Zooming out, over the past two decades of curriculum reform in Shanghai, middle-tier leaders' heavy involvement as supervisors, partners and supporters for schools and teachers has been key in shaping a change mindset among education practitioners as well as the public. Despite the escalating changes in Shanghai schools, there is a general belief in collective endeavor for change, and a pride in Shanghai as the engine for national and international reforms. It is under such a collective and idealized spirit that conflicts have been resolved and resistance has been overcome or absorbed in the education system.

3.2 The middle-tier space for transfer of practice into policy

The Education Commission in Shanghai is governed by professionals with rich experience in schools and/or districts. They have a deep understanding of theory and practice, in addition to their real-life experience at the front line of schooling. The guiding principles for education policymaking in Shanghai include that it should be evidence-based; it should be appropriate and responsive to 'real' educational issues; it should be feasible in practice. How can these goals be achieved, given policymaking is such a complex and ever-changing process? How can policy initiatives match practice in Shanghai schools, and school practice fit in line with the school development goals? The middle-tier space, where middle-tier leaders know both policy and practice well, is a bridge for such match-making.

If a reform idea is proposed based on evidence and practice from elsewhere, the government starts with contextualization, finding out with research whether it is

suitable for Shanghai and, if so, how. Another approach, arguably more straightforward, is to identify innovative and cutting-edge practices in the classrooms and schools in Shanghai soil and turn them into policies and government-led reform initiatives.

Middle-tier leaders play important roles in both top-down and bottom-up approaches of policy formulation. For the top-down approach, they conduct research and provide evidence for policymaking, and they consult the policy-makers with their rich experience in and with the schools. They ensure that government policies match the reality in schools. For the bottom-up approach, they identify and evaluate best practices initiated by schools and teachers in the school space and extract and conceptualize the experience to present to the policy-makers. They discover and identify grassroots experiments and explorations that they consider beneficial for the future development of schooling and/or that they consider in line with the directions where the government reforms are heading. The policy-makers then visit the schools where innovations take place and organize research and evaluation, following which they formulate reform policies.

In addition to the middle-tier leaders, projects, workshops, and seminars in the middle-tier space are equally important drivers for bottom-up change. Projects are designed and allocated in the wider framework for change. In addition to funding, they create room for schools and teachers to explore freely in the school setting. They experiment and test new ideas with workshops and seminars.

Research and consultation for evidence-based policy-making and policy refinement

When policy-makers in the Shanghai government decide to initiate reform, they need to test its validity, reliability, feasibility, and generalizability in practice, and to concretize related details and measures to formulate realistic policies. A starting point is to conduct research to solicit the opinions of school practitioners,

families, and the wider society on the possible reform options. The next steps are teaching and teacher research for policy details, measures, and instruments.

For example, in 2019, the government planned to reform the admission to elite high schools to make them accessible to a bigger proportion of students from lower-ranking schools. The policy, released in 2021, stated that from 2023 50-70% of the elite high school places should be distributed to districts and schools rather than admission solely based on students' *Zhongkao* (entrance examinations to high school) results. The policy also specified rules and procedures for quota distribution. The 50-70% and rules for allocation were based on the KYY's research and experiments prior to the release of the policy.

When a policy direction is taking shape, the government will allocate funding to the Keyan line in the form of projects with a general theme in this direction. KYY could, under this general direction, determine their own research topics, through which the funding is tuned into a series of research projects on different topics. Each project would focus on concrete aspects of the reform direction. In the project, KYY works closely with expert teachers and leaders from schools, JYY, and external experts such as university professors, depending on the research questions.

For instance, if it is on textbooks, the KYY collaborate closely with the JYY, among others; and if it is on school improvement, they work closely with prestigious principals and teachers. Through the agency of middle-tier leaders, projects do not merely secure funding for experiments and explorations but become mechanisms for KYY to bring together various experiences and expertise to collect research evidence to inform policymaking. In the process, potential KYY candidates are trained and evaluated. Actors in the project had much autonomy in the research design, data collection, and analysis. The research outcomes lay the basis for concrete suggestions and consultancies for policy formulation.

As reforms are ongoing, more research is conducted to feedback to the policy-makers on the problems and opinions of various stakeholders during the policy enactment so that the policy-makers can adjust and refine related policies and regulations. Linking practice to policy middle-tier leaders makes the grassroots experience and voices heard by policy-makers and policy-makers' ambitions and planning heard by practitioners.

Showcase and recommendation for school-based reforms to become municipal/national reforms

Rather than being just passive recipients of top-down reforms, many Shanghai schools are dynamic and active in experimenting with cutting-edge education theories and exploring innovative practices. Some do so to tackle challenges in teaching/learning and operation, while others do so for broader school improvement. In addition to advice and leadership, middle-tier space offers projects to encourage and support schools for innovation and change.

As introduced at the beginning of the chapter, the middle-tier space can be viewed as a fabric with fixed positions where middle-tier leaders are stationed, and fluid practice is achieved in projects and exchanges (workshops, seminars, policy forums, symposiums, etc.). Projects pave the way for independent trial-and-error by schools and teachers. The formal and informal exchange created a platform for school-based adventures to be demonstrated and seen by middle-tier leaders. During the exchange, middle-tier leaders discover, evaluate and identify valuable reform practices by schools and teachers.

The innovative practices at the school level could have been confined to these schools if invisible to policy-makers. When middle-tier leaders discover them, they extract these innovations to inform and advise policy-makers. Some workshops and symposiums in the middle-tier space are meeting points for policy-makers and change-makers in schools. School innovations and the impact they have made can be directly demonstrated to policy-makers. As such, the middle-tier space makes the invisible visible, and some school-based reforms have become the basis for Shanghai-wide, and even nation-wide reforms.

Box 1. Turning School Innovations into Municipal and National Policies

Datong Middle School started developing a school-based curriculum entitled “inquiry-based learning as an independent subject” in 1987. The school explored inquiry-based learning for over a decade until discovered. The curriculum that the school developed has become the prototype of inquiry-based learning for all high schools in China.

Similarly, an initiative by Chaoyang No. 2 High School on comprehensive assessment was carried out as a project for school improvement. The assessment matured and improved by stages, and was discovered in a symposium where the case was demonstrated. The assessment later became the basic version of the Shanghai Program for Comprehensive Assessment. The principal was appointed the head of Shanghai Teaching Research Office.

3.3 The middle-tier space for reducing the disparity gaps

Teaching education has today become much stronger in Shanghai. However, teaching researchers continue to lead capacity development for novice teachers. Teacher professional development is much more diversified compared to seven decades ago, but middle-tier leaders remain the major force driving collaborative teacher professional development in schools. From the middle level, they can (re-)distribute resources and support according to the varied needs of schools and teachers. They evaluate and identify teachers and schools needing support to catch up with their peers and provide tailor-made leadership. In so doing, they try to address disparities among teachers and schools in a fast-changing environment.

A gap the master studio fills is the temporary shortage of qualified and outstanding school principals as many outstanding principals reach their retirement age. Some

expert teachers or middle-tier leaders have been promoted to school principals but have had little experience in school management and leadership. The Master Studio is a hub for capacity building and for these principals to share, learn and seek support and guidance.

Box 2. The Growth of a “Green Principal” into a “Studio Master”

The leader of a master studio who is a prestigious principal shared her understanding of master studios and her own experience of growth:

Using a metaphor, the master studio is like a craftsman’s workshop, where a master trains the apprentices hand to hand. In the process the apprentices grow into good managers. Each studio has its own character shaped by the character of the master, which in turn leaves a mark on the managers trained in different studios.

Before I became a principal, I was a Chinese teacher, then a school manager, and then a teaching researcher in Chinese. I am very grateful to the studio, because when I became the principal I shifted from a teaching researcher specialized in the language subject but had no clue about overall management. It was overwhelming, and I had feelings of panic. I had no idea about management, planning, financing and curriculum design. I then joined the studio of a senior experienced principal in our district. The studio was a great platform for me to receive training from senior experts and university professors in curriculum development, planning, and financing. The studio has a group of people, and we can learn from each other without reservation. The peers offered advice and companionship. We discussed our challenges and supported each other.

Challenges

Chapter

4

The middle-tier space has played key roles in bridging policy and practice, fostering bottom-up innovations, nurturing leaders, and providing support. It is an institutionalized form of leading from the middle. It has its cultural roots in Chinese values of collectivity, responsibility, and meritocracy. It is also embedded in a political regime of a strong government.

These cultural roots are modified by neoliberal values that emphasize efficiency and performativity. Under the pressures to compete and perform and the obligation to collaborate and contribute to the community, teachers and middle-tier leaders may feel divided and alienated from the education they do. Despite the contributions of the middle-tier space to education reforms in Shanghai, the authors identify the following drawbacks and challenges.

4.1 A highly selective and meritocratic environment

Middle-tier leaders excel in severe competition: many of them described the nature of their career as ‘a high-level of challenge, high-level of pressure, high-level of achievement, high-level of responsibilities’. One must have determination, initiative, and resilience to overcome all the evaluations, competitions, and difficulties. Once they reach the top, they can benefit from many privileges: professional prestige, social respect, networking, and funding resources that ordinary teachers do not easily have access to. This professional capital, in turn, triggers the accumulation of more capital. Yet only a small number of teachers reach the top: as some leaders remarked, ‘this is highly competitive, and the standards are extremely high. The system can only leverage about 10% of teachers

to become middle-tier leaders'. 10% are the most capable instructional leaders who could move and impact beyond and among individual schools and work in and from the middle-tier space in the Shanghai education system. Given the total population of Shanghai teachers (121,2000), 10% are around 12,000 middle-tier leaders. These are huge. Those instructional leaders who only work in their schools with limited impacts are not included in our report as this study focuses on the middle-tier in the system.

More Ph.D. graduates have been recruited in Shanghai schools. But they still account for a very small share of the whole teaching profession. Moreover, the Ph.D. degree cannot be automatically transferred into leadership. Ph.D. graduates still need practical experiences to grow into instructional leaders.

4.2 Dilemmas: motivation vs. performativity and collaboration vs. competition

Alongside the competitive battle for excellence are **two dilemmas: a) motivation/incentives and performativity, and b) collaboration and competition**. When everything happening in schools and the middle-tier space needs to be demonstrated and evaluated as performance indicators, changes initiated for educational purposes could be reduced to cards for competition. The demonstration can be turned into an extreme form of performativity.

Competition between teachers, schools, and districts sometimes also impedes transparency and sharing. The colleagues ought to collaborate and enjoy collaboration and to get fulfillment from their contribution to the communities. Yet they “must compete to distinguish themselves from others” for promotion, reward, and reputation. They struggle between these dilemmas, having to constantly reflect and balance to stay true to their missions.

4.3 Scaling up in complex contextual constraints

As mentioned in the analysis, a successful model cannot be copy-pasted in a different context. Even imitation is not as easy as it appears to be. Therefore, people - the traveling actors in the middle-tier space - are the key to scaling up the best practices. Costs could be high (for projects that do not fly), and actors may be caught in dilemmas when the sharing of experience might create strong rivals for competition.

4.4 When change becomes the norm, teachers can become numb

Among teachers who have not made it to the middle-tier leaders yet, some actively swim with the tide of reforms, some keep trying to excel and get into the middle tier, and others choose to ignore it. The strong leadership and support from the middle-tier space have made the frequent reforms acceptable and tolerable. However, despite the system-wide and multilateral support, reforms increase the workload of already heavily loaded school work. Some teachers have struggled to follow the fast-paced change and have given up, while others simply become indifferent. In this case, they may quote a popular Chinese proverb, “The best way to deal with change is to remain unchanged”.

Some middle-tier leaders also expressed the change fatigue: “Given the high frequency of meeting and heavy load of studio tasks, members would also complain about ‘lack of time and energy’.” (MS-T3). This is a challenge for the system as well as the aspiring instructional leaders. However, a Master principal as the chair shared his observation and inner drive to continue the enterprise of cultivating middle-tier instructional leaders.

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“I love my subject. I have a strong passion for developing our subject and its curriculum reform. Some people chatted with me and suggested I save my energy at this stage when I have all the rewards and recognition. I could let it go, but I couldn’t help. I just want to contribute all I could do for our subject reform and subject teacher development. I am not speaking highly of myself. This is my life pursuit. There is no reimbursement or honorarium for the studio chair (for the Forth Programme). But I am so satisfied and comforted at witnessing teachers’ growth on their various stages.....This is an inherent drive for me to continue this. ” (MS-C1)

This quote shows in the Master Studio that the professional passion of the senior leaders could exert an impact on the platform, which is invisible but powerful to nurturing emerging leaders.

For example, a previous member of the chair principal (MS-C1) commented on his leadership and impact:

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“Mr. Chair did a lot of things by himself, including mentoring studio members. He is so patient to teach once, twice, and three times. The way he mentors us makes us grow and develop. He gives you opportunities, professional companionship, experiences, and methods.....He is passing on his passion, ways of thinking, working methods, and spiritual calling. He teaches us holistically, not solves something specific problems”. (MS-C4)

Takeaways

Chapter 5

This chapter aims to illustrate how Shanghai's middle-tier operates and manages to drive forward educational reforms. Lessons can be drawn from the tier's strengths and challenges.

5.1 Sustainable capacity development can be fostered by empowering local outstanding educators

Rather than taking ready-made policies and best practices from other countries, the middle-tier leaders supported Shanghai's system in finding its own path for development.

Whilst external support, such as foreign aid and capacity development programs led by international experts, can bring valuable resources and expertise to countries with resource constraints that are struggling in teacher education and professional development, reliance on such external support cannot be sustainable. Shanghai's experience highlights the importance of building internal capacity by mobilizing home-grown talents, namely educators grounded in daily educational practices.

5.2 The middle-tier space allows professionals to share best practices and jointly develop the system beyond individual schools

In settings where institutional and regional disparities are sharp and qualified teachers, and middle-tier leaders are few, stationing the latter in a separate

institution above schools at the district and municipal level can allow them to develop the whole system equitably and efficiently. Firstly, by enabling them to supervise and support all schools; secondly, by creating a resource pool for timely professional support; thirdly, by building a platform for showcasing, discovering, and exchanging fruitful practices.

Furthermore, in some resource-rich countries, teacher professional learning communities are scattered: this constrains the sharing of best practices and exacerbates inequalities between weaker and stronger schools/districts. The Shanghai experience highlights the importance of making all pertinent resources and outstanding leaders available to all schools and teachers by systematically striving to bring them together.

Finally, a lesson can be drawn for policy-makers who struggle to find the balance between teacher incentives to compete, excel and collaborate in today's neoliberal context. Shanghai's example highlights the importance of preserving and cultivating a collective culture and utilizing middle-tier leaders as messengers for sharing and development across school boundaries.

5.3 The government must allocate resources and be committed to align policy with practice

To begin with, both aforementioned takeaways require the investment of resources in terms of funding (for projects), staffing (positions in specialized institutions), and time (to experiment, test, and improve). An estimate by the

Shanghai participants indicates that 1-3% of human resources from schools go into the middle-tier. Furthermore, system change implies sustained commitment from government officials: working with the middle-tier requires rich experience in leadership, teaching, and translation of policy and practice.

For resource-constrained countries, a starting point is to trust in their local teacher-leaders and invest in the middle-tier as a space of empowerment beyond schools by prioritizing the most urgent domains. For resource-rich countries, the government can reconsider its commitment and investment in promoting concerted efforts and equitable inclusive change: as the Chinese say, we are *'tied together as strands of rope with everyone's heart and efforts directed towards common goals'*.

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