Education in the Asia-Pacific Region:
Issues, Concerns and Prospects 21

Charlene Tan

Learning from Shanghai

Lessons on Achieving Educational Success

UNESCO UNEVOC INTERNATIONAL CENTRE

ASIA-PACIFIC EDUCATIONAL RESEARCH ASSOCIATION

Springer

Learning from Shanghai

EDUCATION IN THE ASIA-PACIFIC REGION: ISSUES, CONCERNS AND PROSPECTS

Volume 21

For further volumes:
http://www.springer.com/series/5888

Charlene Tan

Learning from Shanghai

Lessons on Achieving Educational Success

Springer

Charlene Tan
Policy and Leadership Studies
National Institute of Education
Nanyang Technological University
Singapore

ISBN 978-981-4021-86-9 ISBN 978-981-4021-87-6 (eBook)
DOI 10.1007/978-981-4021-87-6
Springer Dordrecht Heidelberg London New York Singapore

Library of Congress Control Number: 2012951124

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

To my husband Lim Pin (twb)

Prologue

As I write the prologue, I'm comfortably seated at home with a shawl wrapped around me. The shawl is lovely – it's made of 100% cashmere, extremely soft to the touch, and hand-painted with delicate plum flowers.

The shawl was given to me by a Shanghai school principal whose school I visited last year. When presenting me with the shawl, he said to me, "Teacher Chen, our school has a gift for you. It's a shawl made in China. Do you know that there're different grades of shawls here? Some cost just 99 yuan (about US$15) but others many times more."

Photo 1 The price tag of the shawl

When I returned to my room, I removed the wrapper and saw the price tag: 1,580 yuan (about US$250). That's equivalent to about half a month's salary of a beginning teacher in Shanghai.

The shawl's brand was 'Story in Shanghai' [Shanghai gushi]. How apt, I thought, for I had intended to write a story about Shanghai.

The shawl was just one of many gifts I've received from the Shanghai principals when I visited their schools. They arranged for their school drivers to chauffeur me, invited me to expensive meals at posh restaurants, and accompanied me on visits to various places of interest, including a day-trip to nearby Suzhou one weekend.

The warmth and hospitality I've received from the school principals were overwhelming. The principals simply spared no effort to make me feel welcome. Perhaps it helped that they did not see me as just any visitor. I was their course instructor when they studied for a Master's degree in Singapore some years ago. So there's a special teacher-student relationship between us. "One day as my teacher, the rest of my life as my father" [yiri weishi zhongshen weifu], one principal, quoting a Chinese proverb, said to me. A Shanghai teacher I met in a school gave me a gift and said, "Since you're our principal's teacher, you're also our teacher". Indeed, the perceived high status of a teacher and a strong teacher-student bond reflect the sociocultural values held by Shanghai educators.

I was in Shanghai in May and June 2011 to research for this book on education in Shanghai. Shanghai has gained international attention since its impressive performance in the Programme for International Student Assessment (PISA) in 2009. PISA evaluates the quality, equity and efficiency of school systems in some 70 countries that comprise nine-tenths of the world economy (OECD, 2010a). What differentiates PISA from other international assessments is its focus on the students' ability to use their knowledge and skills to meet real-life challenges. Shanghai students emerged top among 65 countries and economies in all 3 categories in 2009: reading, mathematics, and science (OECD, 2010b, 2010c).[1] Shanghai also has the world's highest percentage (76%) of 'resilient students' in 2009, defined as students who come from the bottom quarter of the distribution of socioeconomic background in their country who have scored in the top quarter among students from all countries with similar socioeconomic backgrounds (OECD, 2010e, p. 13).

In a report entitled 'What makes a school successful', OECD defines a successful school system as one that performs above average and shows below-average

[1] OECD (2010d, p. 23) defines 'reading', 'mathematics' and 'science' as follows: reading refers to "the capacity of an individual to understand, use, reflect on and engage with written texts in order to achieve his/her goals, to develop his/her knowledge and potential, and to participate in society". Mathematics refers to "the capacity of an individual to formulate, employ and interpret mathematics in a variety of contexts" and "assists individuals in recognising the role that mathematics plays in the world and in making well-founded judgments and decisions that constructive, engaged and reflective citizens would require". Science refers primarily to "the extent to which an individual possesses scientific knowledge and uses that knowledge to identify questions, acquire new knowledge, explain scientific phenomena, draw evidence-based conclusions about science-related issues" and "engages in science-related issues and with the ideas of science, as a reflective citizen".

socioeconomic inequalities (OECD, 2010a, p. 13). Based on this definition, OECD declares that Shanghai is a 'stunning success' (OECD, 2010a, p. 3). At the point of writing this book, the results for PISA 2012 have yet been announced. But it is highly probable that Shanghai will continue to out-perform many other countries in PISA and produce many resilient students.

There are a number of factors to account for Shanghai's educational success (as I shall elaborate in this book), but one key factor is the school leaders. The Shanghai educators I've taught and met are all well-versed in international affairs, global in their outlook, IT savvy and even 'Westernised' compared to their counterparts in other parts of China. But beneath all these are deeply ingrained sociocultural values, beliefs and logics that shape their behaviours and influence their school leadership styles. And it's this curious mix of tradition and modernity, a synthesis of East and West, that characterises school leadership, teaching and learning in Shanghai.[2] It is a story that is waiting to be told.

Like the shawl, this book tells a 'Shanghai Story' – a story of a city's relentless quest for and achievement of 'stunning success' in education.

[2]It is of course difficult to define what one means by 'East' and 'West'. It is beyond the scope of this book to engage in a detailed discussion of the terms. For the purpose of this research, I use the term 'East' to refer to China and other East Asian countries such as Japan and South Korea. I use the term 'West' to refer to Anglophone countries such as the United States and the United Kingdom.

Acknowledgements

Writing this book has been a privilege and joy for me. I am most grateful to all the Shanghai principals, vice-principals, education officers, teachers and students for providing me with valuable research data. In particular, I am indebted to the school principals in Shanghai who hosted me when I visited their schools in May and June 2011. They, as well as their school staff, have showered me with so much warmth, care and concern that my trip has been most fruitful, enjoyable and memorable!

I am thankful to Dr. Foo Suan Fong of Dunman High School and Dr. Zhang Junhua of East China Normal University for assisting me in my research and arranging for my stay at East China Normal University. Special thanks go to Benjamin Tan for his expert proofreading; Lawrence Liu, Kanako Tanaka and Yoka Janssen of Springer and Ernesto Oriola of SPi Global for their editorial assistance; Dr. Hairon Salleh and Dr. Kim Koh for their valued feedback on my research focus and method as well as their kind support; Dr. Ng Pak Tee, Sharon Quek, and Dr. Connie Ng for their wonderful encouragement; and my loving husband Lim Pin for being my valley of Achor.

All the persons mentioned are not in any way responsible for any mistakes found in this book, which are wholly mine. *Ebenezer*

Singapore
June 2012

Charlene Hwee Phio Tan
(a.k.a. Teacher Chen)

Introduction by the Series Editors

As the Organisation for Economic Cooperation and Development (OECD) in Paris points out, Shanghai has achieved very impressive success in the performance levels achieved by students in the Programme for International Student Assessment (PISA). PISA focuses on the ability of students to use their knowledge and skills to meet real-life challenges. Shanghai students have achieved 'stunning success', being top of the 65 countries and areas taking part in the international assessment exercise (PISA), in all of the three areas assessed: reading, mathematics and science.

There has been worldwide interest in explaining how and why Shanghai students are the top performers in PISA. The author of this informative and interesting book seeks to explain this success by answering three key questions: How successful is education in Shanghai? What factors contribute towards educational success in Shanghai? What can the world learn from Shanghai's education success?

This is an important book on an important subject. It tells the story of Shanghai's very successful efforts to achieve great educational success for its students and as such provides a role model for others throughout the world who are keen to achieve the same high-level outcomes for their students. It examines international implications of the Shanghai PISA results, and what the rest of the world can learn from Shanghai. This is a fascinating book which provides deep and ensuring insights to explain the success of students in Shanghai. Many researchers and policy makers have gone to Shanghai to try to better understand this phenomena.

Charlene Tan's research shows that there are many lessons to be learnt from Shanghai. For example, the Shanghai experience demonstrates the desirability and value of taking ideas from elsewhere and then adapting them judiciously to meet the local context. Ideas from other parts of the world are adopted selectively and carefully in Shanghai, and not on a wholesale basis.

The book is a blend of quantitative and qualitative data. We find the interview data particularly insightful, with the reporting of quotes from the interviews doing much to personalize the data and make it even more powerful than would otherwise be the case.

Charlene Tan demonstrates that policy makers, education leaders and teachers in Shanghai are open minded, show a willingness to borrow ideas from elsewhere which

they then modify to accommodate the local context and Chinese culture. As one teacher interviewed put it: 'Teachers in Shanghai do not go solo'. Shanghai educators have a shared vision on education which contributes to education success.

This book has much of value to teach us about achieving educational success. It deserves to be widely read.

Rupert Maclean, Hong Kong Institute of Education
Ryo Watanabe, National Institute for Educational Policy Research (NIER), Tokyo

Contents

List of Photos

Note: All photos are taken by the author.

List of Tables

Chapter 1
The Beginning: Shanghai, PISA and Globalisation

Photo 1.1 An inscription on a rock in a school

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_1, © Springer Science+Business Media Dordrecht 2013

I came across this rock in one of the schools I visited in Shanghai. The inscription reads: 'learn painstakingly, experience joyfully' [keku xuexi, kuaile tiyan].

Painstaking learning is not new to Shanghai or China as a whole. The Chinese word 'ku' literally means 'bitter'. The Chinese commonly emphasise the need to 'eat bitter' [chiku] – to be ready to endure hardship before one can be successful in life. When I asked Shanghai educators and students the reasons for Shanghai's educational success, quite a number cited hard work. 'Our students spend more hours studying than their peers in other countries', said a vice-principal. 'We study very hard from young. We need to get into a good university', a student told me.

The students' hard work is matched by the teachers' diligence in teaching. 'In Shanghai schools, such as our school, many teachers are very dedicated to their profession', said a teacher. 'Once the child doesn't do well, the teacher will panic', he added. The culture of painstaking learning explains, to an extent, why Shanghai has the world's highest percentage of resilient students in 2009 PISA: many Shanghai students 'ate bitter' to overcome socioeconomic barriers and excel academically.

But toil and sweat alone cannot account for Shanghai's educational success. After all, there are also hardworking students and teachers in other countries. Furthermore, Shanghai students, by performing extremely well in PISA, have demonstrated that they are capable of applying what they have learnt to solve real-life questions in a test situation. Such ability cannot be acquired just by working hard; it must be due to *the way* in which the students are taught in schools. In other words, another reason for Shanghai's success in PISA is the experience Shanghai schools offer to their students. Whenever I mentioned Shanghai to Chinese educators who are not from Shanghai, I was often met with responses such as 'Shanghai is not like the rest of China', 'Shanghai is different, it's at the forefront of educational reforms' and 'Shanghai students have richer learning experiences'.

The Shanghai educators themselves have also pointed out the unique conditions of Shanghai. A Shanghai school principal said to me, 'Shanghai students' abilities are the best in China; the students have a broad horizon and many opportunities to exchange ideas with others because Shanghai is an international city'. Referring to classroom practices, a Shanghai teacher opined: 'Shanghai did well for PISA because the focus now is to let students experience by discussing, interacting and taking the initiative in learning'. Concurred a vice-principal: 'Our school implemented a "Joyful Education" [yukuai jiaoyu] programme to provide our children with experiential learning'.

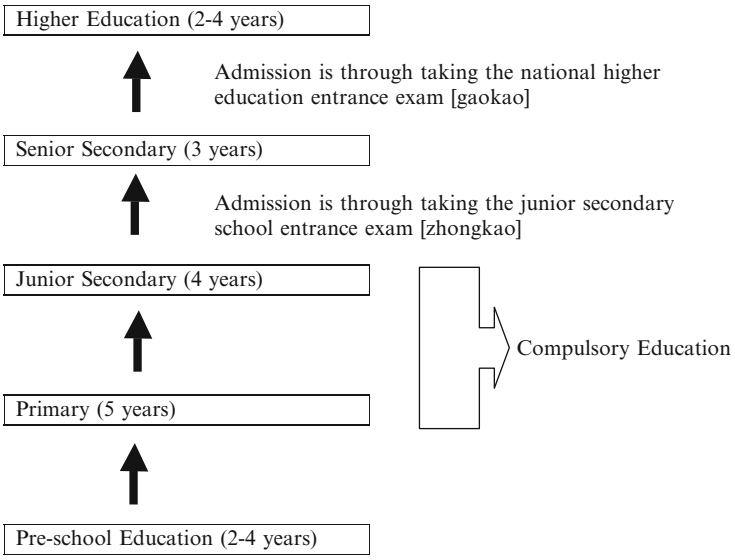
It appears that 'learn painstakingly, experience joyfully' encapsulates the realities of education in Shanghai. I shall elaborate on how Shanghai combines the Chinese virtue of hard work and other cultural values with 'Westernised' curriculum theories and practices in subsequent chapters. For now, I would like to discuss the 'big picture' – the global setting against which education in Shanghai is situated. This will be followed by an explanation of the research focus and methods, and an outline of the chapters. For a start, it would be helpful for me to give a brief introduction to education in Shanghai.

A Brief Introduction to Education in Shanghai

Education in mainland China since 1949 has been heavily influenced by the education model of the former Soviet Union. The focus has been on knowledge transmission through the '3 centres': teacher-centredness, classroom-centredness and text-centredness (Cai & Jin, 2010; Yan, 2009). But educational developments in Shanghai, especially from the 1980s onwards, followed a different trajectory from the rest of China.[1]

With a population of over 20 million, Shanghai is a big cosmopolitan city with arguably the most developed basic education system in China. A provincial municipality under the direct administration of the Chinese central government, Shanghai has been given a relatively high degree of autonomy to formulate, implement and experiment with curriculum reforms (Marton, 2006; Tan, 2012). Shanghai was the first city to implement the 9-year compulsory education policy in 1978. It was also the first region in China to be given the freedom to conduct its own national higher education entrance exam (also known as national college entrance exam) [gaokao] in 1985. Table 1.1 shows the educational structure in Shanghai.

Table 1.1 Educational structure in Shanghai



[1] For further reading on the modern history of education in Shanghai, see Wang (2003) and Shen (2007).

Shanghai adopts a '5-4-3' model for its basic education (Shanghai Municipal Education Commission, 2011c). All children are required to complete at least 9 years of schooling: 5 years of primary education and 4 years of junior secondary education. After junior secondary level, students may proceed to senior secondary (high school) level where they study for another 3 years before sitting for the national college or higher education entrance exam [gaokao] to qualify them for higher education.[2] Higher education could be a university education (usually 4–5 years) or education at an institution of higher learning such as professional technical colleges (usually 2–3 years) (Cheng, 2011).

Shanghai enjoys relatively high student enrolment rates across all levels: 98% for kindergarten, 99.9 % for primary and junior secondary levels and 98% for the senior secondary level in 2010 (Shanghai Municipal Education Commission, 2011b). More than 80 % of the city's student cohort that are of higher education age are admitted into higher education courses (OECD, 2010b). Currently there are about 764 primary schools and 754 junior and senior secondary schools with about 1.3 million students, taught by a total of around 88,600 full-time teachers (Shanghai Municipal Education Commission, 2011c; Shen, 2007).[3] For higher education, there are around 60 universities and other institutions of higher learning (Shen, 2007).

There are 2 levels of government in Shanghai: the municipal government and the district/county government. There are currently 16 districts and 1 county in Shanghai. Administratively, all primary and junior secondary schools and all but 5 senior secondary schools come directly under the district/county education bureau of their respective district/county governments (the other 5 senior secondary schools are directly managed by the municipal authority). The district/county education bureaus in turn report to the Shanghai Municipal Education Commission, which is the educational agency of the municipal government. For the rest of the book, I shall use the term 'district' to include both 'district' and 'county' in Shanghai, unless otherwise stated.

Educational management in Shanghai is based on a 'two-tier government, two-tier management' [liangji zhengfu, liangji guanli] system (Shen, 2007, p. 20). On the one hand, this system gives the municipal government and education commission the

[2] The full name of the national higher education entrance exam is 'National standardised exam for student admission into ordinary higher institutions in China' [zhongguo de putong gaodeng xuexiao zhaosheng quanguo tongyi kaoshi]. For a good introduction of the national college entrance exam in China, see Daveya, Lian, and Higgins (2007).

[3] The numbers are taken from Shen (2007) and the Shanghai Municipal Education Commission (2011c) and may have changed slightly since the publication of these two sources. While Shanghai Municipal Education Commission (2011a) reports that there are 754 secondary schools and 764 primary schools with 1.3228 million students in total, Shanghai Municipal Education Commission (2011b, p. 1) reports that there are 755 secondary schools and 766 primary schools with 1.2960 million students in total. The total number of 88,600 full-time teachers is obtained from Shen (2007) who was the director general of Shanghai Municipal Education Commission. He reports that there are 51,200 full-time teachers in the secondary schools and 37,400 full-time teachers in the primary schools (2007, p. 14). It is instructive to note that the majority of the secondary schools are 'regular schools' or academic schools that prepare their students for a place in the university, while the rest are predominantly specialised and vocational schools (Shen 2007, p. 127).

authority to formulate policy as well as supervise, evaluate and inspect school reform and development in the various districts. The local governments at the district level, on the other hand, are given the autonomy to design and implement specific education policy initiatives as well as approve and bear the educational expenditure for schools in their districts. The Shanghai authorities' heavy investment in education is evident in its rising spending on basic education over the years. The annual total expenditure on basic education for 2010 was RMB 283.29 billion [about USD 45 billion]; this is an increase of 13.6% compared to 2009, and an increase of 68.17% compared to 2005 (Shanghai Municipal Education Commission, 2011b).

Having obtained an introduction to education in Shanghai, let us look at the larger social context that circumscribes educational developments in Shanghai.

Globalisation and Global Forms

Education in Shanghai takes place against a backdrop of globalisation that is essentially characterised by the rapid acceleration of cross-border flows of capital, goods, services, people and ideas (Green, 2007, p. 23). Globalisation arrives at a locality through *global forms*. A global form is an encompassing and dynamic phenomenon that moves across diverse social and cultural situations and spheres of life (Collier & Ong, 2005, p. 11). Examples of global forms are stem cell research, neo-liberal rationality, educational desire, global education policy and curriculum reform.[4]

Two global forms are of particular relevance to education in Shanghai. The first one is *internationally standardised assessment* such as PISA. In an era of globalisation, high-stakes testing at the national and international levels through assessment systems has become the major steering mechanism of schooling systems in many countries (Rizvi & Lingard, 2010). Referring to the imperative for Shanghai to go international by participating in PISA, Wang Jueyan, the former director of the teaching-research office of Shanghai Municipal Education Commission, avers that 'it is our shame if Shanghai, as an international metropolis, is unable to speak about its educational quality using data [from PISA]' (Wang, 2011a, p. 48). Another senior education officer from Shanghai, Jiang Yinqiao, elaborates on the motivations for Shanghai's participation in PISA:

> Some colleagues ask, what is Shanghai's objective in participating in PISA? There are three objectives. First, we hope to use an international assessment system such as PISA to know where we stand in our basic education. Secondly, Shanghai has carried out basic education reform for many years. We hope to use an international benchmark to measure the effect of the reform. Thirdly, we will be able to learn progressive educational ideologies and techniques from our participation in PISA in order to improve our assessment approach. (Jiang, 2011)

[4] For further reading on the global form of stem cell research, see Collier and Ong (2005); on neoliberal rationality, see Ong (2007); on educational desire, see Kipnis (2011); on an emergent global education policy, see Koh (2011); and on curriculum reform, see Tan (2012).

By borrowing educational theories and practices from overseas, especially from Western countries such as the United States, Shanghai authorities hope to improve teaching and learning, establish an educational quality assurance system and influence exam approaches in Shanghai secondary and primary schools (Wang, 2011a, p. 48).

This 'go global' mindset is not new in Shanghai. Shanghai policymakers have always underscored the need to learn new theories and practices from outside China. Back in 1994, Wang Shenghong who was the Director of the Committee on Curriculum and Teaching Materials for Primary and Secondary Schools in Shanghai stated:

> Let us assimilate experience from other parts of the country, as well as from other countries around the world, on the reforming of the curriculum and teaching materials, and enthusiastically but cautiously take a firm grasp of this reform in primary and secondary schools. (Wang, 1994, p. 31)

Besides international assessment, another example of a global form is *curriculum reform*. Curriculum reform is closely linked to international assessment as many states are attempting to reform their educational systems in response to their students' performance in international tests (Kamens & McNeely, 2010). Shanghai's educational success, as many interviewees have pointed out to me, is due partly to the curriculum reforms in Shanghai schools. The former director of the teaching-research office of Shanghai Municipal Education Commission declares that the 'success of Shanghai in PISA is essentially the success of Shanghai's over 20 years of curriculum reform' (Wang, 2011a, p. 50). I shall elaborate on the specific curriculum reform initiatives in subsequent chapters.

Cultural Scripts

The introduction of a global form to a locality is not a straightforward process. This is because globalisation is not a simple process of secular transformation that is totalising, homogeneous, universal and stable. Rather, the global form comes into contact with local forms – a host of situated sociocultural values, beliefs, logics, practices, tactics and approaches in a locality. Hence, globalisation brings about not just global changes but opportunities, anxieties, challenges, dilemmas and/or conflicts to the state and people in a society. To further understand the nature of the interaction between global and local forms, it is helpful to introduce the concept of *cultural scripts*.

A cultural script is a mental picture, a generalised piece of knowledge that is widely shared among people of a culture (Stigler & Hiebert, 1999; Tan, 2011a). It informs one about things, guides one's behaviour and tells participants what to expect. It is learnt implicitly through observation and participation, and not by deliberate study. This knowledge includes cultural beliefs and assumptions that underpin the way of life of a people, the ways that individuals treat one another and the vision and purposes of an organisation or society (Hargreaves, Halasz, & Pont, 2007, p. 11). Stigler and Hiebert highlight the existence and role of beliefs and assumptions that surround the cultural activity of teaching:

> The scripts for teaching in each country appear to rest on a relatively small and tacit set of core beliefs about the nature of the subject, about how students learn, and about the role that a teacher should play in the classroom. These beliefs, often implicit, serve to maintain the stability of cultural systems over time. Just as we have pointed out that features of teaching need to be understood in terms of the underlying systems in which they are embedded, so, too, these systems of teaching, because they are cultural, must be understood in relation to the cultural beliefs and assumptions that surround them. (pp. 87–88)[5]

I would like to add three points to Stigler and Hiebert's observations. First, not only is teaching surrounded by a set of cultural beliefs and assumptions; the same is true of learning, school management and other educational activities. This follows from my earlier point that the cultural scripts underpin the total way of life of a group of people by informing one about things, guiding one's behaviour and telling participants what to expect.

Secondly, while the cultural scripts serve to maintain the stability of cultural systems over time, these beliefs and assumptions are themselves influenced by the cultural systems and are subject to change over time. To better understand this perspective, I suggest we view cultural scripts as being located *within a particular tradition*. I have elsewhere argued that a tradition is a social process of constructing shared meanings that seeks to instruct a community of members on the correct form and purpose of a given practice (Tan, 2011b). Adherence to a tradition entails members sharing a common set of core beliefs that define and is defined by that tradition. The core beliefs include concepts such as 'rationality', 'critical thinking', 'evidence' and 'autonomy' that are understood and acquired within the context of a specific tradition. This means that a satisfactory understanding of the concepts and value of critical thinking, rationality and autonomy needs to consider the vital role of a 'convictional community' to objectivise and legitimise the public structure of beliefs and give it internal coherence through cultural scripts (Tan, 2011b; Thiessen, 1993).

It is also important to note that cultural scripts are not static and unchanging. Rather, they are constituted and reconstituted through their ongoing interaction between the past, present and future. A tradition is constantly defined and redefined through external exchanges and conflicts; these changes are initiated and contributed by friends and foes outside the tradition as well as fellow members of the community. In the process, particular cultural scripts belonging to the tradition are added, reinforced, weakened or replaced, thereby challenging and modifying the fundamental agreements of the tradition through time.

Thirdly, cultural scripts are held and conveyed by local stakeholders who are not passive and helpless recipients waiting to be colonised by the global form. Rather, the stakeholders are active agents who attempt to express their reflections, circumventions and interventions in response to the presence of the global form. Through the processes of cooperation, compromise, negotiation, conflict, mediation and struggle,

[5] Stigler and Hiebert's concept of cultural script is similar to what Jin and Cortazzi (2006) term as a 'culture of learning'. Jin and Cortazzi use that term to refer to 'taken-for-granted frameworks of expectations, attitudes, values and beliefs about how to teach or learn successfully and about how to use talk in interaction, among other aspects of learning' (p. 9).

further changes and transformations to the global forms and/or cultural scripts may occur. These changes and transformations may be new outcomes, solutions, decisions, logics, relationships and other possibilities.

In short, a cultural script is a coherent and evolving set of shared beliefs and assumptions located within a particular tradition that undergird the vision and purposes of a society. In the case of educational success, the educational outcomes of a locality depend, to a large extent, on the interplay between global forms and cultural scripts. Put otherwise, global forms such as internationally standardised assessment and curriculum reform are mediated by cultural scripts. The latter manifest themselves in situated politics, knowledge, social norms and ethics. The constant and unpredictable interplay between the global form and cultural scripts results in the former reconstituting and recontextualising itself for assimilation into the new local environment. At the same time, the interaction between the global forms and cultural scripts may lead to the latter being questioned, revised and transformed in the long run.

Take the example of the global form of curriculum reform in Shanghai. As I shall argue in subsequent chapters, new curriculum reform initiatives drawn from Anglophone countries such as the United States take on Chinese characteristics due to the mediation and intervention of local values, assumptions and practices. In the process, the cultural scripts for teaching and learning are being questioned and revised too in Shanghai.

To conclude this section, it is through a dynamic interaction and interplay between the global forms and cultural scripts that educational success takes place in a locality such as Shanghai. But a question remains: what do we mean by 'educational success'? The next section clarifies the term.

Research Focus

While an important starting line of inquiry for this book is Shanghai's impressive performance in PISA, my research goes beyond PISA performance to the broader notion of *educational success*.[6] My choice of 'educational success' rather than

[6] Some authors such as Dohn (2007) and Grek (2009) have questioned the validity of PISA questions in assessing the students' ability to apply knowledge and solve problems in a variety of situations. It is beyond the scope of this book to discuss the extent to which PISA accurately measures the ability of the students across the countries. Suffice it to say that PISA is a written assessment and therefore tests the students' ability to use their knowledge and skills to meet real-life challenges in a test situation. Ross, Cen and Zhou (2009) rightly point out that international assessments such as PISA 'are outcome and/or reputation-driven and have overlooked the student experience and educational processes' (p. 34). That is why this book, while acknowledging Shanghai's remarkable achievements in PISA, goes beyond PISA to focus on the broader concept of educational success.

'schooling success' is deliberate. The former is an encompassing term that includes not just *formal* education (schooling) but *informal* education (lifelong learning process through one's daily experiences as a member of a community) and *non-formal* education (any organised educational activity outside the established formal system such as private tuition).

The reference to educational success underscores the fact that schooling success necessarily exists in a society where formal, informal and non-formal education collectively contributes towards educational excellence for the students (Tan, 2011). After all, schooling success depends on a myriad of local sociocultural conditions that could work for and/or against the schools' best efforts. For example, the commendable efforts of a school to improve the test scores of its students will come to nought if the students' parents do not see the merit of test scores and prefer instead to keep their children (especially daughters) at home.[7] In this regard, a successful school requires a moral vision that is shared not just between the school principal and staff but also with the educational stakeholders such as the parents, students, social organisations and community at large.

On the notion of educational success, there is an extensive body of literature highlighting the need for policymakers, educators and community at large to believe that all children can achieve; to provide education for all; to set high school standards to prepare students for challenges of globalisation; to emphasise the development of 21st-century competencies such as critical reflection, innovative thinking, problem solving and communication skills; to give autonomy to school leaders and teachers for them to improve and innovate practices; to invest in teacher education, professional development and collaboration; and to encourage effective and sustained home-school-community partnerships (e.g. see Hopkins, 2005; Marzano, Waters & McNulty, 2005; McKinsey & Company, 2007; Mehan, Villanueva, Hubbard, & Lintz, 1999; OECD, 2010e; Purkey & Novak, 1984; Rich, 1985; Slavin, Madden, Dolan, & Waskin, 1996; Tan, 2007a, 2011a).

What is common across the literature on educational success is the focus on the following 4 components: a shared moral vision, standards and policies, school leadership and management, and teaching and learning. First, a shared moral vision is a common set of values, beliefs and assumptions held by the school leaders, teachers, students and other key stakeholders in a locality. This is closely linked to the cultural scripts discussed earlier. Educational success in any locality needs to be underpinned and surrounded by cultural scripts that advance rather than hinder the goal

[7] Such an attitude of not seeing the importance of sending their children to school is evident among some parents in Cambodia and China. During my fieldwork in Cambodia, I met a Cambodian principal of a primary school who shared with me her frustration in persuading parents from the village to send their children to school. According to her, a number of Cambodian parents prefer their children, especially sons, to contribute to the family income by working in the field. In the case of Muslim parents in China, their reluctance to send their daughters to school stems partly from the traditional mindset that does not value education for girls and partly from their concern that the school does not provide adequate facilities such as separate lavatories for their daughters. For more information, see Tan (2008a) and Tan and Ding (2012).

of such success (Jin & Cortazzi, 2006; Stigler & Hiebert, 1999). An example of a cultural assumption that supports educational success is the belief that all children, regardless of ethnicity, religion and home background, are capable of achieving success. Other examples are the high-value society places on academic qualification and the high status of teachers in a community.

Secondly, educational success in a locality requires a set of standards and policies to provide the structural framework for and support to schools (Hargreaves, Halasz & Pont, 2007; Louis, Toole & Hargreaves, 1999; Tan, 2011b). Guided by the standards and policies that are shared across the educational system, schools are then able to achieve educational success through effective school leadership and management, which is the third component needed for educational success (Marzano, Waters & McNulty, 2005; OECD, 2010e). Finally, educational success cannot be achieved if the quality of teaching and learning is not high enough to enable all students to maximise their potentials and benefit from the system (McKinsey & Company, 2007; Mehan, Villanueva, Hubbard, & Lintz, 1999).

In identifying a framework for educational success, I find OECD's description of the key characteristics of high-performing and rapidly improving education systems instructive as it covers the same 4 components I have highlighted. Adapting from OECD's description (OECD, 2010e, p. 4), this book defines 'educational success' based on the following 4 components:

- *Shared Moral Vision*: The school leaders, teachers, students and other key stakeholders subscribe to a shared vision that values education, believes that all children can achieve, and holds that all schools have a responsibility to bring out the best in every child and provide equal learning opportunities for all students.
- *Standards and Policies*: The schools adhere to clear and ambitious standards and policies that are shared across the educational system, and are aligned with high-stakes gateways and instructional systems.
- *School Leadership and Management*: The schools are run by people who are given the autonomy to allocate resources, organise work, conduct field-based research that inform practice, invest in teacher training and collaborate to improve school performance with effective accountability system.
- *Teaching and Learning*: The schools are able to deliver high-quality teaching and learning and promote complex and higher-order thinking consistently so that students from across the education system benefit from equal learning opportunities.

Guided by the above understanding of educational success, this book seeks to answer the following research questions:

- What is Shanghai's shared vision on education and how does this vision contribute towards Shanghai's educational success?
- What are the standards and policies introduced by the Shanghai authorities across the educational system and how do they help the schools fulfil the shared vision?

- How do Shanghai schools allocate resources, organise work, conduct field-based research that inform practice, and invest in teacher training and collaboration to fulfil the shared vision?
- How do Shanghai schools deliver high-quality teaching and learning, and promote complex and higher-order thinking consistently to fulfil the shared vision?

Research Method

The research data for this book were collected primarily from 4 sources: literature review, interview, questionnaire and fieldwork.

For literature review, I consulted literature published in both English and Mandarin but my focus was on the latter as they contain information that is relatively under-researched and new to non-Chinese academics and educators. For literature in Mandarin, I analysed more than 100 sources that comprise policy papers, research papers written by academics and educators from China, Shanghai's exam papers and worksheets, newspaper articles, school documents and entries on Chinese websites. I subsequently cited about 90 sources in this book (see the reference list at the end of this book for details). I also accessed and analysed one Shanghai school's online resources through its school portal as well as an online repository set-up by the Shanghai authority that provides teaching and research resources for Shanghai teachers.

I obtained research data from a total of 27 school principals, 29 vice-principals, 33 teachers, 20 students and three district education officers from Shanghai through focus group interviews, questionnaires and fieldwork from January 2011 to May 2012. The research participants (except for the 20 students who were from one junior secondary school) came from a total of 58 primary, junior secondary and senior secondary schools from 12 districts and one county in Shanghai. These participants were chosen as they were fairly representative of the schools, educators and students across the districts in Shanghai.

With respect to the interviews, 14 semi-structured focus group interviews were conducted in Mandarin on 10 school principals, 18 vice-principals, 33 teachers, 20 students and three district education officers in Shanghai between January and June 2011. The interviews, which were conducted in groups with size ranging from 2 to 10 participants, were guided by the following questions:

- What do you think are the main factors that contributed towards Shanghai's success in PISA in 2009?
- How far do you think Shanghai has achieved educational success?
- In what ways do you think Shanghai has achieved educational success?
- What do you think are the main factors for Shanghai's educational success?
- What do you think are some issues and challenges that hinder educational success in Shanghai?
- What do you think are the areas of improvement needed for education in Shanghai?

The above broad questions were useful to lead the participants into a more in-depth sharing on their personal views of Shanghai's goals for education, standards, policies, structures and procedures introduced by the authorities; the organisation and allocation of resources, manpower, work, teacher education, training and teacher collaboration in the schools; home-school-community relationships and partnerships; and other relevant aspects of school leadership, management, teaching and learning in Shanghai.

All interviews were audio-recorded with the permission of the interviewees, transcribed, translated and analysed. In my analysis, I first identified the open codes, followed by looking for themes and categories, generating broad patterns from the identified themes and categories, and mapping their relationships and interrelationships. I relied on strategies for meaning making such as sifting for patterns, comparing and sorting gross categories. Unless otherwise indicated, all interviews were conducted in confidentiality, and the names of all participants were withheld by mutual agreement.

To triangulate the data obtained from the interviews, I administered questionnaires to another set of 17 school principals and 10 vice-principals in 2012. I felt that such a follow-up action was necessary for two reasons. First, all the interviews were conducted in a group setting, so there was a possibility that some participants may be self-conscious and not be forthcoming in their responses. My concern stems from my awareness that the Chinese generally value collectivism and social harmony so some may not be comfortable with disagreeing with others in public. Secondly, I had interviewed more vice-principals than principals earlier so I wanted to elicit more views from the principals to triangulate the interview data. The individual questionnaires which were completed in Mandarin focused on the same open-ended questions stated earlier and all the respondents were assured of their anonymity. The data collected went through similar analysis as the focus group interview data.

The fourth source of research materials was data obtained from fieldwork conducted in 14 public schools in Shanghai in 2011. I have chosen to focus on public schools rather than private schools as the majority (81.1%) of primary and secondary schools in Shanghai are public (Shanghai Municipal Education Commission, 2011c). The 14 schools from 10 districts and one county comprise 2 schools that offer primary education, 5 schools that offer junior secondary education and 10 schools that offer senior secondary education. That adds up to 17 schools that exceed 14 schools because there are 3 integrated schools among the 14 schools (School 4, 5 and 9 in Table 1.2), that is, schools that offer more than one stage of schooling. The basic information of the schools is provided in the table below (I have omitted the schools' names and districts for confidentiality reasons):

During my fieldwork, I carried out informal interviews with the school staff and students and gathered relevant data on the schools' profiles, key characteristics, curricula, pedagogies and other relevant aspects of teaching and learning. I also engaged in participant observations by taking part in various school events. These included observing 4 classroom lessons, 2 teacher discussion groups (known locally as the 'teaching-research group' and 'lesson preparation group': I shall explain them in detail

Table 1.2 Basic information of the schools involved in the fieldwork

School	School profile
School 1	A junior secondary school that was established in the early 1990s. It has over 300 students and about 50 staff. It is a low-performing school and one quarter of the student population are children of migrant workers from other provinces.
School 2	A senior secondary school that was established in the late 1950s. An above-average-performing school, it has over 2,000 students and about 150 staff. It is particularly strong in robotics with the school winning awards in international competitions.
School 3	A senior secondary school that was established in the early 1920s. With over 2,000 students and about 150 staff, it is a high-performing (key-point) school at the municipal level. It occupies a sprawling compound with more than 600 computers and 100,000 library books.
School 4	A 9-year integrated school comprising primary and junior secondary levels. It is led by a special-grade principal who is well known in Shanghai for transforming the school from an academically weak school to become one of the best public schools in the city.
School 5	A 6-year integrated school comprising junior and senior secondary levels. An average-performing school, it has with over 2,000 students and 300 teachers. It became one of the largest schools in the district as a result of three schools merging into one in the late 2000s.
School 6	A senior secondary school that was established in the mid-1950s. An above-average-performing school, it is affiliated with a teacher training university and is led by a principal who has won awards for his school programmes.
School 7	A senior secondary school that has over a 100 years of history. It has over 1,000 students and about 110 staff. More than 40,000 students have graduated from the school, including many illustrious poets, writers and educators.
School 8	A senior secondary school that is a high-performing (key-point) school at the municipal level. Affiliated with a teacher training university, the school is known for having many excellent senior and high-grade teachers.
School 9	A 6-year integrated school comprising junior and senior secondary levels. It was established in the mid-1950s and is known for its artistic and musical achievements, especially in the Chinese orchestral scene.
School 10	A senior secondary school that is a high-performing (key-point) school at the municipal level. Established in the early 1920s, it is affiliated with a teacher training university and has won awards for pioneering a new pedagogy.
School 11	A senior secondary school that is relatively new, having been established in the mid-1950s. An average-performing school, it is known for its artistic achievements and partnership with a music college.
School 12	A senior secondary school that is a high-performing (key-point) school at the municipal level. Established in the early 1910s, it has over 2,300 students and about 220 staff. It has been appointed by the authorities to accept ethnic minority students from Xinjiang.
School 13	A primary school that was established in the early 1910s. A top-performing and award-winning school in the city, it is a popular school with many of its students' parents being graduates and working professionals.
School 14	A junior secondary school that was established in the mid-1950s. It has close to 400 students and about 60 staff. An average-performing school, it is a village school where most of the students are children of farmers.

in subsequent chapters), 2 staff meetings and 3 student events, including one student debate where I was one of the judges. I also joined the staff to lunch in the staff canteen and chatted with the teachers, parents, students and school staff. My stay at the East China Normal University in Shanghai also enabled me to meet and exchange ideas with an associate professor and other faculty members from the university.

I need to clarify that my observations of and participation in the activities of the 14 schools were not selected and arranged beforehand. In other words, all the school activities I was involved in were part and parcel of the day-to-day running of the schools. Although these activities reflect the realities of schooling in Shanghai, they may not be representative of the range of programmes available in Shanghai schools in general. Another drawback is that the sample size for my participant observations is small. But I believe that my observations and participation have given me rare insights into the daily operations of Shanghai schools. The compilation of the above field notes therefore provided data to help in the triangulation findings (Spradley, 1980).

Besides the above-mentioned primary sources of research data, I also obtained valuable research materials over the past 4 years through my role as a course instructor to Chinese school leaders. Since 2008, I have been teaching a Master's course on educational policymaking to school leaders from Shanghai and other parts of China. The course not only gave me access to relevant and up-to-date literature on educational developments in Shanghai but it also opened the door for me to discuss issues with different cohorts of school principals, vice-principals, school party secretaries, district education officers, heads of department and other educators from different types of schools and various districts in Shanghai.

I should also add something about my background as it is relevant to the research. I am a Singaporean Chinese who grew up in a family with Chinese/Confucian values. My ethnicity and fluency in Mandarin mean that I could easily pass off as a mainland Chinese in Shanghai; indeed, one bookshop owner in Shanghai thought that I was from the nearby provinces of Zhejiang or Fujian. This is not far from the truth as my maternal grandparents hailed from Fujian, and many Singaporean Chinese like myself speak Mandarin with a southern accent. It also helps that Shanghai is very cosmopolitan with one-third of its population comprising people from other parts of China and overseas. One taxi driver in Shanghai told me that many people who asked him for directions were no longer non-Chinese tourists but ethnic Chinese migrants or visitors who spoke Mandarin. I could therefore easily blend in and converse freely with the masses in Shanghai. Given my background, I see myself both as an 'insider' who understands and experiences Chinese culture and education albeit from a Singaporean perspective, as well as an 'outsider' – a critical observer of the cultural and educational worldview and system in Shanghai.

Chapter Outline

This book is broadly divided into 3 interrelated and overlapping parts, each with its own emphasis. The first part focuses on *the people* – the key educational stakeholders who contribute towards Shanghai's educational outcomes. There are a total

of 4 chapters that focus on Shanghai principals, teachers, parents and students. I have left out the role of the municipal and district education authorities in this part, as I will focus on them in the next part. The chapters discuss the active roles played by the various stakeholders in assembling their logics, tactics and countermeasures to achieve their own educational agendas. Throughout the chapters, we see the presence of the global forms of internationally standardised assessment through PISA and curriculum reform in Shanghai, and the dynamic interactions between the global forms with cultural scripts. What unites the various educational stakeholders is their shared vision that values education, education for all children, and academic success.

Part Two examines *the policy* formulated and implemented by the Shanghai Municipal Education Commission, district education bureaus and schools. The 7 chapters point out that the overarching goal of curriculum reform in Shanghai is 'quality-oriented education' based on educational balance and equality. The chapters critically explore the various standards and policies that are shared across the educational system in Shanghai that guide and monitor school management, school appraisal, curriculum, pedagogy and assessment and teacher professional development. A common thread that runs across the chapters is the phenomenon of 'decentralised centralism' where school leaders are given the autonomy to launch school-based curriculum but they remain accountable to the control and discipline of the municipal and district authorities.

The final part analyses *the practice* at the school level. The themes of the 6 chapters here are teaching, learning, teacher collaboration, teacher training and appraisal in Shanghai schools. Readers are introduced to some innovative pedagogical approaches that support the curriculum reform, as well as 'Chinese-style' critical thinking in Shanghai schools. They will also read about various structural and cultural means of and support for teacher growth and control through mentoring, teaching-research, lesson observations, school-based training and teacher appraisal.

The last chapter draws our discussion to a close by returning to the research questions mentioned in this chapter. It highlights the key factors that account for Shanghai's educational success and concludes with some significant lessons the world can learn from Shanghai.

Conclusion

This introductory chapter discussed how education in Shanghai is situated in the context of globalisation where global forms interact with situated sociocultural values and practices. The dual accent on the global form and cultural script is exemplified in the proverb 'learn painstakingly, experience joyfully', quoted at the start of the chapter. 'Experience joyfully' represents Shanghai's acceptance of the global form of curriculum reform where the emphasis worldwide is on student experience and real-world application. On the other hand, 'learn painstakingly' represents the cultural script for Shanghai where the students, as well as the

policymakers, school leaders, teachers and parents, push themselves to a limit to achieve educational excellence.

We shall begin our Shanghai story by focusing on a group of people who are at the forefront of Shanghai's educational success: the school principals.

References

Cai, B., & Jin, Y. (2010). Woguo jichu jiaoyu gaige de xianshi jingyu yu weilai jueze [Realistic circumstances and future choices of reforms in basic education in China]. *Journal of Shanghai Normal University (Philosophy & Social Sciences Edition), 39*(1), 92–102.

Cheng, K.-M. (2011). Shanghai: How a big city in a developing country leaped to the head of the class. In M. S. Tucker (Ed.), *"Surpassing Shanghai": An agenda for American education built on the world's leading systems* (pp. 21–50). Cambridge: Harvard University Press.

Collier, J. S., & Ong, A. (2005). Global assemblages, anthropological problems. In A. Ong & S. J. Collier (Eds.), *Global assemblages: Technology, politics and ethics as anthropological problems* (pp. 3–21). Malden: Blackwell.

Daveya, G., Lian, C. D., & Higgins, L. (2007). The university entrance examination system in China. *Journal of Further and Higher Education, 31*(4), 385–396.

Dohn, B. N. (2007). Knowledge and skills for PISA – Assessing the assessment. *Journal of Philosophy of Education, 41*(1), 1–16.

Green, A. (2007). Globalisation and the changing nature of the state in East Asia. *Globalisation, Societies and Education, 5*(1), 23–38.

Grek, S. (2009). Governing by numbers: The PISA 'effect' in Europe. *Journal of Education Policy, 24*(1), 23–37.

Hargreaves, A., Halász, G., & Pont, B. (2007). *School improvement for systematic improvement in Finland. A case study for the OECD activity improving school leadership*. http://www.oecd.org/dataoecd/43/17/39928629.pdf. Accessed 4 Jan 2012.

Hopkins, D. (Ed.). (2005). *The practice and theory of school improvement*. Dordrecht: Springer.

Jiang, Y. (2011). *Jiang Yinqiao: PISA kaoshi qishilu – yi Shanghai diqu weili* [Jiang Yinqiao: revelations from PISA assessment – using Shanghai as an example]. http://www.bonoffer.com/view-3269-1.html. Accessed 20 Jan 2012.

Jin, L., & Cortazzi, M. (2006). Changing practices in Chinese cultures of learning. *Learning, Culture and Curriculum, 19*(1), 5–20.

Kamens, H. D., & McNeely, L. C. (2010). Globalisation and the growth of international testing and national assessment. *Comparative Education Review, 54*(1), 5–25.

Kipnis, B. A. (2011). *Governing educational desire: Culture, politics, and schooling in China*. Chicago: The University of Chicago Press.

Koh, A. (2011). Singapore's 'global assemblage': Digging into the culture of education policy making. *Critical Studies in Education, 52*(3), 267–278.

Lingard, B. (2010). Policy borrowing, policy learning: Testing times in Australian schooling. *Critical Studies in Education, 51*(2), 129–147.

Louis, K. S., Toole, J., & Hargreaves, A. (1999). Rethinking school improvement. In K. S. Louis & J. Murphy (Eds.), *Handbook of research in educational administration: A project of the American educational research association* (pp. 251–276). New York: Longman.

Marton, M. A. (2006). The cultural politics of curricular reform in China: A case study of geographical education in Shanghai. *Journal of Contemporary China, 15*(47), 233–254.

Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: From research to results*. Alexandria: Association for Supervision and Curriculum Development.

McKinsey and Company. (2007). *How the world's best-performing school systems come out on top*.http://www.mckinsey.com/App_Media/Reports/SSO/Worlds_School_Systems_Final.pdf. Accessed 2 July 2011.

Mehan, H., Villanueva, I., Hubbard, L., & Lintz, A. (1999). *Constructing school success: The consequences of untracking low-achieving students*. Cambridge: Cambridge University Press.

OECD [Organisation for Economic Co-operation and Development]. (2010b). *PISA 2009 results: Executive summary*. http://www.oecd.org/document/61/0,3343,en_32252351_46584327_46567613_1_1_1_1,00.html#News_release_and_press_material. Accessed 12 Apr 2011.

OECD [Organisation for Economic Co-operation and Development]. (2010e). *PISA 2009 results: Overcoming social background – equity in learning opportunities and outcomes* (Vol. II). http://dx.doi.org/10.1787/9789264091504-en. Accessed 12 Apr 2011.

Ong, A. (2007). Neoliberalism as a mobile technology. *Transactions of the Institute of British Geographers, 32*(1), 3–8.

Purkey, W. W., & Novak, J. M. (1984). *Inviting school success: A self-concept approach to teaching and learning*. Belmont: Wadsworth Pub. Co.

Rich, D. (1985). *The forgotten factor in school success, the family: A policymaker's guide*. Washington, DC: Home and School Institute.

Rizvi, F., & Lingard, B. (2010). *Globalizing education policy*. London: Routledge.

Ross, H., Cen, Y., & Zhou, Z. (2009). Assessing student engagement in China: Responding to local and global discourse on raising educational quality. *Current Issues in Comparative Education, 14*(1), 24–37.

Shanghai Municipal Education Commission. (2011a). A survey of basic education in Shanghai. http://www.shmec.gov.cn/english/list.php?type=Overview&area_id=&article_id=63905. Accessed 2 Feb 2012.

Shanghai Municipal Education Commission. (2011b). *Shijiaowei yingfa 'Shanghaishi jichu jiaoyu gaige he fazhan 'shierwu' guihua* [Municipal education commission issues the 'Twelfth Five' plan for Shanghai basic education reform and development]. http://www.shanghai.gov.cn/shanghai/node2314/node2319/node12344/u26ai30352.html. Accessed 10 Feb 2012.

Shanghai Municipal Education Commission. (2011c). *Shanghaishi jiaoyu weiyuanhui guanyu zhuanfa 'Shanghaishi jiaoyu kaoshiyuan guanyu 2011nian benshi zhongdeng xuexiao gaozhong jieduan zhaosheng kaoshi gongzuo de shishi yijian' de tongzhi* [Notice by Shanghai Education Commission regarding forwarding 'Implementation opinion by Shanghai Education Exam Board regarding the exam work for senior secondary student enrolment in 2011']. http://www.shmec.gov.cn/html/xxgk/201103/420052011004.php. Accessed 15 Mar 2012.

Shen, X. (2007). *Shanghai education*. Singapore: Thomson Learning.

Shen, Y. S. (2006b). *Kecheng pingjia* [Classroom appraisal]. Beijing: Beijing Normal University Press.

Slavin, R. E., Madden, N. A., Dolan, L. J., & Wasik, B. H. (1996). *Every child, every school: Success for all*. Thousand Oaks: Corwin Press.

Spradley, J. P. (1980). *Participant observation*. Fort Worth: Harcount Brace College.

Stigler, W. J., & Hiebert, J. (1999). *The teaching gap: Best ideas from the world's teachers for improving education in the classroom*. New York: Free Press.

Tan, C. (2007a). Education reforms in Cambodia: Issues and concerns. *Educational Research for Policy and Practice, 6*(1), 15–24.

Tan, C. (2008a). Two views of education: Promoting civic and moral values in Cambodia schools. *International Journal of Educational Development, 28*(5), 560–570.

Tan, C. (2011a). Framing educational success: A comparative study of Shanghai and Singapore. *Education, Knowledge and Economy, 5*(3), 155–166.

Tan, C. (2011b). *Islamic education and indoctrination: The case in Indonesia*. New York: Routledge.

Tan, C. (2012). The culture of education policy making: Curriculum reform in Shanghai. *Critical Studies in Education, 53*(2), 153–167.

Tan, C., & Ding, K. (2012). The role, developments and challenges of Islamic education in China. Unpublished manuscript

Thiessen, E. J. (1993). *Teaching for commitment: Liberal education, indoctrination and Christian nurture*. Gracewing: McGill-Queen's University Press.

Wang, J. (2011a). Cong PISA2009 ceshi tankaiqu [Views from PISA 2009]. *Shanghai Education, 5*(3A), 48–51.

Wang, S. (1994). Speech at the inaugural conference of the Shanghai primary and secondary schools curriculum and teaching materials reform committee (excerpts). *Chinese Education and Society, 27*(1), 13–42.

Wang, X. (2003). *Education in China since 1976*. Jefferson: McFarland & Company, Inc.

Yan, G. (2009). The construction of the Chinese academic system: Its history and present challenges. *Frontiers of Education in China, 4*(3), 323–342.

Part I
The People

Chapter 2
A Conversation with a Shanghai Principal

'Warmly welcome Professor Chen Huiping to our school!' announced the billboard at the school entrance.

'Chen Huiping' is my Chinese name. The announcement was posted in bright red letters on the school's electronic billboard. I noticed the same announcement in almost every school I've visited in Shanghai. That was the Chinese principal's way of welcoming guests like myself to the school. I felt honoured yet slightly embarrassed about the publicity: I certainly did not see myself as a VIP.

Photo 2.1 An electronic billboard in a school compound welcoming me to the school. It reads 'Warmly welcome Dr. Chen Hui Ping of the National Institute of Education, Nanyang Technological University, Singapore to our school!'

I arrived at the school in the principal's car. The principal had sent his chauffeur to pick me up from East China Normal University, where I have been staying. Most Shanghai principals are provided with a car and a personal chauffeur – all paid for

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_2, © Springer Science+Business Media Dordrecht 2013

by the authorities. 'What a luxury!' I once remarked to a school principal. 'It's actually a necessity as we need to attend many meetings, events, lunches and dinners in different parts of Shanghai', he replied.

Indeed, Shanghai principals have much to do as they take full responsibility for all school affairs. School principals in China used to be Communist Party secretaries appointed to carry out policies made by the Ministry of Education before the mid-1980s; since the mid-1980s, educational professionals have been appointed as principals and the party secretaries become the 'right-hand' persons in schools (Johnson, Møller, Jacobson & Wong, 2008, p. 417). In some schools, however, the principal assumes the dual roles of principal and party secretary. The establishment of the principal accountability system in 1985 means that the school principal takes full responsibility for school affairs, together with the Communist Party secretary. The principal's duties include carrying out the policy initiatives from the district education bureau, making decisions on the school administrative affairs and the use of the school funds, supervising the teaching activities, hiring and dismissing the school staff, and rewarding or punishing the teachers and staff (Tian, 2011, pp. 15–16).

Upon my arrival at the school, I was ushered into the conference room where the principal had been waiting for me. 'Teacher Chen! How are you!' he greeted me with a big smile. I first met the principal in 2008 when he came to Singapore to study for a Master's degree on educational administration. Now a principal of a top-performing (known locally as key-point) senior secondary school, he still looks the same, albeit having put on a few pounds. We proceeded to sit down and had a leisurely chat over Chinese tea.

The Conversation

'How time flies! I have been in this school for 8 years.' He said reflectively.

'That's quite a long time', I remarked, 'so what kept you busy all these years?'

'Yes. When I came to this school, I made some adjustments', he replied. 'The first was to develop the school motto based on the moral values of love and integrity. For a school to grow, we need first of all, a development ideology, a guiding ideology. The second adjustment was to cultivate a school spirit, especially among the teachers, that encourages them to give their best in service. I personally believe that teachers are service providers, you need a high standard to serve, but this service is one of giving your heart and mind.'

Listening to him, what struck me was a principal who has a clear vision for the school.

Taking a sip of the tea, he continued, 'In China, we often have this saying, "There are no students who cannot be taught well, only teachers who cannot teach well." [meiyou jiaobuhao de xuesheng, zhiyou jiaobuhao de laoshi]. So if you've a wholehearted spirit, you'll teach well.'

That was the first time I had heard of the saying. That sounded like expecting a lot from the teachers, I thought to myself. Shouldn't the student or the parent take

some responsibility for the child's learning? What if the student has learning difficulties or low motivation to learn? It is fair to judge a teacher based on his or her students' achievements? These were some questions that went through my mind. But one thing is for sure: the saying illustrates the very high cultural expectation on teachers in China – a cultural script that shapes the teaching and learning in Shanghai.

'I'm sure there're many things you've to handle as the school principal, especially for a big key-point school like yours.' I commented.

'Yes', he said, nodding his head. 'But I think a principal just needs to focus on two things', he added. 'The first is to be concerned with the classroom, because a first-class school should have a first-class classroom. So we're concerned with the students' quality of life in the classroom. It's not just whether the students' results are good today or tomorrow. It's the total development of students for them to be emotionally healthy, moral and able to withstand pressure. Next is learning ability, which means students have a good foundation, are able to learn various things, and can meet the demands of society, including the demands of various ways of learning.'

What he said reminded me of what I have read in the policy papers on curriculum reform in Shanghai. His goals for his students are essentially what 'quality-oriented education' [suzhi jiaoyu] is about – to shift from the traditional exam-oriented education to one that underscores the all-rounded development of students (see Chap. 7 for more details).

'To achieve the two goals', he continued, 'we need school-based research-training [xiaoben yanxiu], to focus on teachers' standards, because managing a school well depends on the teachers. Likewise, teachers' abilities to nurture students and help them grow, primarily depend on the training given by the school. External teacher training by the universities and districts are important, but I think school-based research-training is most important as we know what the teachers really need.'

He has just highlighted to me a feature of education that is unique to Shanghai: the emphasis on and effectiveness of school-based teacher professional development or 'research-training'. The Chinese term for 'research-training' [yanxiu] comprises two characters that mean 'research' [yan] and 'improvement' [xiu]. Together, they signify not just 'training' but training that is research-centred for the purpose of teacher improvement. Under the decentralisation policy, principals now have greater autonomy to formulate and carry out their school-based teacher professional development plans. As a visitor to Shanghai, I was impressed by the extent and quality of teacher professional development in Shanghai schools (see Chaps. 17 and 18 for details).

'How then did you bring about the changes you intended in your school?' I asked.

'This school, in the process of development, has implemented some reforms', he said. 'One reform is to regulate the management system. Times have changed so your management system needs to change every two or three years, otherwise it'll be outdated.'

Fond of quoting Chinese proverbs, he said, 'In China, we've this saying, "Eat from the big pot" [chi daguofan]. It means it's the same whether you do your job

well or not, whether you do more or less; everyone gets the same pay. But this attitude cannot hold anymore in China. So under our allocation system, we underwent massive reforms and began to reward those with good educational results, good teaching results. We underwent changes in the school salary system, in appraisal system, in giving monetary rewards. Now we've a "with labour comes reward" [youlao youchou] system. You'll get more if you do more. I think this is very necessary because at the management level, there is an invisible hand to manage and direct the school.'

As he said this, he moved his hand in a wave-like manner to illustrate the motion of an invisible hand in the air.

'I'm not saying that "human beings are willing to die for money and birds are willing to die for food" [renwei caisi, niaowei shiwang]', he added, quoting another well-known Chinese proverb about the materialistic instinct of human nature. 'But human beings still need to consider their survival. We do not expect everyone's thinking to reach the same level, but money can still have certain effects. So this is one reform. Of course there're other reforms, such as regulation of the teaching system and so on. But I think this monetary reform is the most important.'

He went on to elaborate on how the 'invisible hand' works using the example of 'public' or 'open' lessons [gongkaike]. A public lesson is a lesson conducted by a teacher that is observed and critiqued by others. The 'others' could be teachers from the same school, teachers from other schools, educational experts, parents and members of the public. It can be offered at the school level, district level or municipal level and is a requirement for teacher professional development and teacher appraisal in Shanghai. Such a lesson requires a lot of preparation and can be stressful for teachers.

The principal said: 'For public lessons, we've already created a structural culture. So if you don't want to conduct a public lesson, there's an invisible hand to direct you, to make you do it. Otherwise, you cannot be promoted to the next grade, your assessment score at the mid-year appraisal will not be high'.

I was initially surprised by what I heard. It appeared somewhat incongruent with his earlier sharing about the lofty goals of education, about the moral dimension of teaching where teachers are expected to give their best wholeheartedly. On second thought, however, I realised that what he has shared was not self-contradictory but complementary: his teachers are motivated to give their best through moral suasion *and* material incentives. Perhaps that explains why Shanghai principals are able to lead schools to success: they combine idealism in vision with pragmatism in action.

An engaging conversationalist, he continued, 'A first-class school also depends on having a first-class classroom. 'And a first-class classroom, in my view, needs to point to a direction in reform. This direction needs to suit the students' cognitive development, suit society's development demands, and will not fail in practice. Our school-based curriculum fulfils the spirit of the second phase curriculum reform, and also fulfills our school's requirement for special characteristics.'

He went on to elaborate how his school has launched new expanded and research courses (I shall explain these courses in Chap. 7) and innovative teaching approaches that emphasise student-centred learning. These include experiential learning where students apply scientific principles to test the quality of food they purchase from the supermarkets and a teaching approach that underscores student group discussions and oral presentations. It is evident that the principal has leveraged on the school autonomy given to him to design interesting courses and teaching approaches that are tailored for the school's needs. At the same time, he is careful to ensure that his school initiatives adhere to the spirit and requirements of the curriculum reform.

Turning his focus to the international scene, he added, 'We also want to expand the international horizon of our teachers and students because Shanghai is, after all, China's reform pioneer'. What he said reflected the progressive and outward-looking mindset of many Shanghai principals.

'We need to strengthen our links with schools in Taiwan, the United States, Singapore, for us to nurture students who can truly serve the world in the international arena. So this school vacation, we've 3 teachers who'll go overseas for two months. Two English language teachers and one Chinese language teacher. The Chinese language teacher will go Taiwan. Taiwan, in my view, has transmitted the Chinese cultural tradition more completely than mainland China. One English language teacher will go to the United States, one to the United Kingdom. When they return, they'll lead a big group of teachers over.'

'That sounds great. Where did you get the ideas for your school-based curriculum?' I curiously asked.

'I've a teacher who has a Master's degree,' he explained. 'When I recruited him in 2005, I told him that I would like to read his thesis. I found it very good and since then, I've also consulted other books. So the teacher and I constructed the theoretical framework for the school-based curriculum. I then led the teachers to implement it in the school.'

It was apparent that he was a hands-on principal who led the teachers to explore and research new ideas and implement these ideas school-wide. His school reforms were detailed in the school publications he gave me subsequently that contain a number of research articles and reports written by him and his teachers. It is common for, and expected of, principals and teachers in Shanghai to be active in reading, research, writing and publication. In fact, it is a necessary part on which one's appraisal, continual employment and promotion in Shanghai depends (see Chaps. 17 and 18 for more details). Interestingly, another Shanghai principal candidly told me that she was shocked when she came to Singapore and realised that Singapore principals and teachers rarely published.

The principal's active involvement in the school activities is also evident in his lesson observations of teachers. 'I observe lessons every school term. On average, I listen to 4 lessons per term', he said. Alluding to the cultural value of collectivism where teacher sharing is common, he said, 'I just observe lessons randomly. I'll just say, "Little He [a teacher's name], I'll observe your lesson tomorrow". After that we'll have an informal chat and discuss any problems that arose. It's becoming a part of our

Photo 2.2 Examples of literature published by some Shanghai schools

culture. I call it "Open the classroom door to create learning together as one body" [dakai jiaoshi damen, gongchuang xuexi gongtongti].'

'How about the results?' I probed further.

'We've obtained certain results', he replied. 'Actually I've obtained a prize for my school's teaching and research performance at the district level in 2009. In total, we've 17 teachers who have won awards last year. Among them, we had two teachers who obtained first prize in the national teaching competitions. One is a moral education teacher, another is a Chinese language teacher. Think about it: there are 1.3 billion people in China, and we've 2 teachers standing on the first prize national platform', he said, his face beaming with pride.

'Our exam results have also gone up', he added enthusiastically. 'Our school now commands a greater influence in the community. In terms of our college entrance rate to a four-year university course, it was below 70% in 2006 but it's over 80% now. Many students want to be admitted into our school. Our school is now ranked sixth or seventh in the district.'

What came across strongly in his sharing was his reliance on prizes, exam results, college entrance rates and school rankings to validate his school's success. This is a common phenomenon in China – references to quantifiable yardsticks that are perceived to be objective, scientific and fair. The value and preponderance of targets, indicators and evaluations to measure a school's success in Shanghai reminds me of a performative culture. It is a culture that 'employs judgements, comparisons and displays as means of incentive, control, attrition and change – based on rewards and sanctions (both material and symbolic)' (Ball, 2003, p. 216) (I shall return to this topic in Chap. 19).

Another observation I made was how he was able to skilfully balance the implementation of school reforms with the continual need for students to attain good exam results. How was that possible?

'To be honest, Teacher Chen', he said to me, 'Chinese students have very heavy workloads, so we can only have the Expanded and Research courses in the first school term for students in their first and second senior years. I cannot do this for the second school term as the students have to cope with their examinations. We do not have these courses for year 3 students, as they have gaokao and the school standard examinations coming up, and will be dead tired', he said.

I was surprised by the principal's frankness. Under the requirements stipulated by the Shanghai Municipal Education Commission, all schools need to introduce innovative courses through the expanded and research/inquiry courses to students at all levels (Shanghai Municipal Education Commission, n.d.) (I shall elaborate on these courses in Chaps. 8 and 3.). These courses have been introduced to promote 'quality-oriented' education to prepare the students for the demands of the twenty-first century. What the school principal did was to respond creatively to the official policy by replacing the innovative courses with exam-preparation lessons in the second school term and Year 3 so that he can effectively juggle innovative learning with maintaining or improving the test scores. His action aptly illustrates the Chinese proverb, 'The top has its measure, the bottom has its countermeasure' [shangyou zhengce, xiayou duice]. This refers to responses from someone of a lower rank (in this case the school principal) to circumvent the order given to him or her by someone of a higher rank (in this case the municipal and district authorities).

So what's next? Despite the school's achievements, the principal is not one to rest on his laurels.

'How about tomorrow?' he asked aloud. 'The first thing we needed to do was to increase the teachers' professional quality. Secondly, we need to improve the educational system, for example, by giving the teachers more funds and technical support in training and giving them more platforms to showcase their talent.'

He continued with a determined voice, 'Although we've won prizes, I feel that the school reform is still insufficient. It's not about the prize, but about educational reform to complete the students' character. We've not done this very well, we still need to persevere'.

Special Characteristics of Shanghai Principals

The principal I spoke to is typical of many Shanghai principals I have met. He embodies a number of attributes needed by a school leader to bring about educational success in Shanghai.[1] A professor at East China Normal University, Shen Yushun, has identified a number of what he calls 'special characteristics' of Shanghai principals that set them apart from other principals in China (Shen, 2006a, 2006b, pp. 210–252).

[1] It is instructive that many of the attributes evident in Shanghai principals are found in Shanghai people in general. For example, Law (2007) avers that Shanghai people, when compared with Chinese and other nationals in the rest of China, are perceived to be more knowledgeable, open minded, quick minded, practical and have 'a strong sense of superiority in the pursuit of the quality of life and Western styles' (p. 29).

Professor Shen is well acquainted with Chinese principals as he directs the national principals' training centre in Shanghai. I have reorganised his points into 6 special characteristics and added 3 more of my own.

Special Characteristic 1

Shanghai principals have their own systematic ideology for school management. Everyone has his or her own views on educational problems, understanding of the educational value system and own options for action based on their foundation of understanding.

Special Characteristic 2

Shanghai principals have a very strong sense of professionalism. They have strong learning awareness and are keen to learn. They possess a strong dedication to work hard to fulfil their own educational goals.

Special Characteristic 3

Shanghai principals are open minded and innovative. They are willing to accept new things, accept new educational ideals, and incorporate them into his or her school's educational practices.

Special Characteristic 4

Shanghai principals have a very strong sense of crisis and competitive awareness. Every school is concerned that its students will lag behind others, so key-point (high-performing) schools keep a close watch on one another to avoid lagging behind.

Special Characteristic 5

Shanghai principals are good at making use of opportunities to foster their school's development. This refers to opportunities provided by the country's education policy and by the school's advantages in a locality, through collaboration with the community and international education market.

Special Characteristic 6

Shanghai principals have a strong awareness of the need for good public relations management. They establish a positive societal image of their school and engage in activities that are beneficial to their school's development.

We see all the above characteristics manifested in the principal I spoke to. He is very clear about his vision and development plan for the school. He has been actively involved in researching and conceptualising the school-based curriculum and implementing it in the school. He is open to new ideas on student-centred learning and keen to experiment with them through the school-based curriculum. At the same time, he is mindful of his students' exam results, college entrance rate and school ranking. While keen to collaborate with schools in other countries so that he can adapt the best practices from elsewhere, he also consciously builds up his school's reputation in Shanghai to make it a popular choice among junior secondary graduates.

I would like to add 3 more special characteristics to Shen's list, based on my observations and interactions with Shanghai principals.

Special Characteristics 7

Shanghai principals are good at motivating their staff by using both extrinsic factors through the structural systems of appraisal and promotion and intrinsic factors through the school vision.

We see this characteristic manifested in the principal's use of the structural system (the 'invisible hand') to motivate teachers, coupled with his emphasis on the moral dimension of teaching. In subsequent chapters, we shall see how the 'invisible hand' and the moral dimension of teaching complement each other and work together to spur Shanghai teachers on to improve themselves and contribute towards educational success.

Special Characteristics 8

Shanghai principals are skilful in balancing the implementation of curriculum reform and ensuring good exam results. To do so, they attempt to and succeed in assembling their own logics, tactics and countermeasures to achieve their goals for the school.

We see this characteristic in the principal's explanation of how he balances innovative courses with exam preparation. The countermeasure of the principal is not an isolated case. Another Shanghai principal told me that it is not uncommon for principals to cut down or even cancel physical fitness lessons for the entire year for their graduating students in junior and senior secondary schools. An academic in Shanghai points out that 'the curriculum time meant for the elective courses is

reflected in the timetable, but because of the pressure of exams, it is actually used for the teaching of other subjects' (Zhen, 2006, p. 123, as cited in Tan, 2012, p. 163). A survey reports that 30.7% of primary and secondary schools do not devote sufficient amount of curriculum time for innovative elective courses (specifically inquiry/research courses) as required by the authority (Shanghai Municipal Education Commission, 2007a, cited in Tan, 2011a, p. 163). The resistance and intervention of the principal demonstrate the active role of the school leaders in their interaction with the global form of curriculum reform.

Special Characteristics 9

Shanghai principals have a poetic sense of humour.

We have seen how the school principal I interviewed was adept at quoting Chinese proverbs to illustrate his points. I have met many principals who similarly use humour to illustrate and amplify the challenges they face as principals. Their wittiness is often linked to an appreciation of the rhythmic structure or a play of words in the Chinese language (that shows the beauty of the Chinese language too).

For example, in explaining the struggle of many Shanghai principles to balance college entrance rate [shengxuelü] with innovative elective courses, a school principal (not the one mentioned in this chapter) said to me while bursting into laughter:

English translation	Chinese version
If you don't have (high) college entrance rates, you cannot survive today	你没有升学率, 你过不了今天。 Ni meiyou shengxuelü, ni guobuliao jintian
If you only have (high) college entrance rates, you cannot survive tomorrow	你只有升学率, 你过不了明天。 Ni zhiyou shengxuelü, ni guobuliao mingtian

He has used a couplet consisting of 2 lines that rhyme and share the same metre. In the Chinese version above, we see how the 2 lines consist of the same number of characters and are almost identical except for the underlined characters.

Sometimes it is a play on words. Another school principal explained to me that the shift from exam-oriented education to quality-oriented education makes people question whether they should really value 'quality' [suzhi] in quality-oriented education or 'value of scores' [shuzhi], the latter referring to the exam scores in an exam-oriented education. The two words 'suzhi' and 'shuzhi' sound almost the same (with differences in pronunciation and tones), but their meanings are worlds apart.

English translation	Chinese version
Quality	Suzhi 素质
Value of (exam) scores	Shuzhi 数值

Conclusion

The Shanghai principal I interviewed represents principals in Shanghai who are distinguished by their qualities of being visionary, dynamic, open minded and pragmatic (for details on the conditions and practices of successful principalship in Shanghai, see Wong, 2005). As we parted company, the principal said to me earnestly, 'We'll carry on, and I believe our curriculum content will be even more substantial in 2 to 3 years time'.

I have no doubt about that.

References

Ball, S. J. (2003). The teacher's soul and the terrors of performativity. *Journal of Education Policy, 18*(2), 215–228.

Johnson, L., Møller, J., Jacobson, S. L., & Wong, K. C. (2008). Cross-national comparisons in the International Successful School Principalship Project (ISSPP): The USA, Norway and China. *Scandinavian Journal of Educational Research, 52*(4), 407–422.

Law, W.-W. (2007). Globalisation, city development and citizenship education in China's Shanghai. *International Journal of Educational Development, 27*(1), 18–38.

Shanghai Municipal Education Commission. (2007a). *Shanghaishi zhongxiaoxue kecheng yu jiaoxue gaige xianzhuang diaocha baogao* [Survey report of Shanghai secondary and primary school curriculum and teaching reform]. http://xbyx.cersp.com/xxzy/ztlw/200711/2002.html. Accessed 3 Mar 2012.

Shen, Y. (2006a). Xuexiao jiaoyu zhiliang baozhang wenti tanxi [Exploring the problems for school education quality assurance]. In Y. Shen (Ed.), *Zou xiang youzhi jiaoyu* [Walking towards quality education] (pp. 210–252). Shanghai: East China Normal University Press.

Shen, Y. S. (2006b). *Kecheng pingjia* [Classroom appraisal]. Beijing: Beijing Normal University Press.

Tan, C. (2011a). Framing educational success: A comparative study of Shanghai and Singapore. *Education, Knowledge and Economy, 5*(3), 155–166.

Tan, C. (2012). The culture of education policy making: Curriculum reform in Shanghai. *Critical Studies in Education, 53*(2), 153–167.

Tian, M. (2011). *Distributed leadership and teachers' self-efficacy: The case studies of three Chinese schools in Shanghai.* Master's thesis, Department of Education, Institute of Educational Leadership, University of Jyväskylä. https://jyx.jyu.fi/dspace/bitstream/handle/123456789/37175/URN:NBN:fi:jyu-201201091015.pdf?sequence=1. Accessed 7 Mar 2012.

Wong, K.-C. (2005). Conditions and practices of successful principalship in Shanghai. *Journal of Educational Administration, 43*(6), 552–562.

Zhen, J. (2006). Xiaoben yanjiu [School-based research]. In Shen, Y. (Ed.). *Zou xiang youzhi jiaoyu* [Walking towards quality education] (pp. 84–124). Shanghai: East China Normal University Press.

Chapter 3
The Chinese Teacher as a Chess Master

Photo 3.1 A boy playing Chinese chess with his grandfather while his grandmother looks on

My earliest memory of my maternal grandfather was of him playing Chinese chess. An avid player, he derived much enjoyment sparring with his neighbours and friends in a game of chess. As a child, I was intrigued by the long silence and intense concentration of the players. I didn't understand the game then, but I couldn't fail but notice my grandfather spending much time analysing the chess moves, strategising his moves and preempting his opponent's moves in order to win the game.

Chinese chess serves as an appropriate analogy for us to understand the teachers in Shanghai. Chinese teachers, like master chess players, are known for putting in a lot of thought and preparation in their teaching and training their students to make the 'right

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_3, © Springer Science+Business Media Dordrecht 2013

moves' in exams. (I shall return to and elaborate on the chess analogy later.) This attitude is expressed in a local proverb that 'to give a student a cup of water, a teacher should have a bucket of water' [yaogei xuesheng yibeishui, jiaoshi ziji yinggai you yitongshui]. As explained by a Chinese academic: 'It means a teacher should be familiar with not only the teaching materials, but also the wider background knowledge relevant to the teaching materials' (Chen, 2009, p. 97).

It is noteworthy that the Chinese word for 'teacher' is 'jiaoshi' which comprises two characters: 'jiao' which means 'teach' and 'shi' which means 'master' or 'expert'. Therefore, the term 'jiaoshi' underscores the cultural belief that a teacher should not just be an instructor but a 'teaching master' or 'teaching expert'. To quench the student's thirst, a teacher should have many, many cups of water, or simply put, have a bucket of water.

Under the current curriculum reform in Shanghai, 'giving a student a cup of water' means more than just imparting a set of knowledge and ability to the student. The teacher is also expected to promote the desirable emotions, attitudes and values in their students using appropriate processes and methods. Borrowing the three dimensions of emotion, attitude and values; knowledge and ability; and process and method, I shall examine how Shanghai teachers excel to varying degrees in these three dimensions.

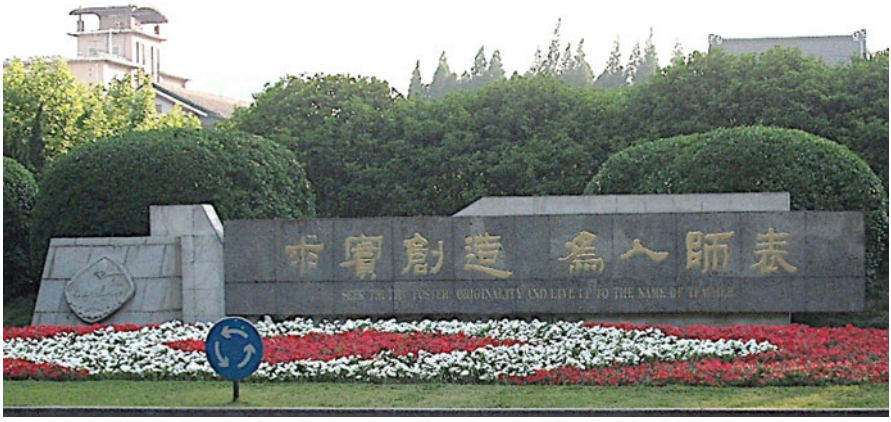


Photo 3.2 The inscription at East China Normal University in Shanghai reads 'Seek the truth, foster originality and live up to the name of teacher' [qiushi chuangzao, weiren shibiao]

Emotion, Attitude and Values

'In Shanghai schools, such as our school, many teachers are very dedicated to their profession', said a teacher from a senior secondary school. 'Teachers here have to be concerned with weak students as well as strong students', he added.

The teacher was responding to my question on the high percentage of resilient students in Shanghai as reported in PISA 2009. Many Shanghai teachers are strongly motivated to helping their students to excel academically. A recent survey of Shanghai students and parents show that 90.46% of students and 86.59% of parents agree that their teachers are very keen to help the students when they face learning difficulties (Shanghai Education Information Investigation Team, 2005).

I've also personally witnessed the incredible work ethics of Shanghai teachers. A mathematics teacher I met on a Saturday told me that she has to return to school the next day (Sunday) to coach her students. According to her, teachers in her school coach the senior year 2 students every Sunday for half a day. For senior year 3 students, it is every Sunday for half a day in the first school term and the whole day for the second school term. 'This is common in Shanghai schools', she said. Although teachers are paid extra for the coaching on weekends, the coaching is not optional for the teachers but is seen as an obligation for one to be a 'good teacher'. Such coaching is prohibited by the Shanghai authority in its bid to reduce the school-work burden of students, but apparently still takes place under the radar. 'Our school is already quite moderate. Some schools are more "ferocious" and put in even more hours', she said solemnly. Such circumvention of the official policy demonstrates the countermeasures taken by the teachers and school leaders in their quest to maintain or improve their college entrance rates.

I've also come across articles written by teachers who professed to take a personal responsibility for their students' poor performance. For example, a teacher, in reviewing the unsatisfactory results of the weaker students in her class, stated:

> If I am unable to excite the students' learning interest, help and correct their learning attitude and habit, then it shows that my teaching is still deficient. I have a responsibility to actively correct these weak students. (Ye, 2008, p. 85)

The dedication of Shanghai teachers is strengthened by strong parental expectation that a teacher is responsible for the learning and results of his or her students. A teacher explained:

> This commitment of teachers is also due to social and family influences. PISA results show that the achievement gap between students is very small. It's because once the child doesn't do well, the family will panic, and the teacher will panic. The parent will come to the school to inquire. So the teacher has to coach the weaker students.

Socially, there is a belief that teachers are and should be responsible for their students' results. Recall the Chinese proverb quoted by the school principal I interviewed in the previous chapter: 'There are no students who cannot be taught well, only teachers who cannot teach well'. This social perception has cultural and historical origins. In ancient China, a teacher was a scholar who had mastered the classics by passing the gruelling imperial exams and hence was qualified to tutor others. Among the teachers in the history of China, Confucius was regarded as the teacher par excellence.[1]

[1] For further readings on the teaching of Confucius and the relevance of his teachings to East Asian societies, see Tan (forthcoming).

Complimenting the social expectation of teachers is the sociocultural view of students. Influenced by Confucian teaching of meritocracy, perfectibility of human beings and academic achievement as the means for one to be a court official, many Chinese believe that all children can achieve and should be given equal opportunities to learn regardless of background. Furthermore, a good education, understood as a good university education, is perceived to be the passport to success and happiness in life. The premium placed on education gave rise to the Chinese saying that 'No one should be deprived of an education, no matter how poor you are' [zaiqiong yebunengyou qiongjiaoyu]. The historical legacy of a teacher results in the term 'teacher' [laoshi] connoting respect and honour in China. I was surprised when I first learnt from my mainland Chinese friends that being addressed as 'Teacher Chen' by a mainland Chinese is more valued than being called 'Professor Chen'. The latter merely signifies my professional title while the former implies the addressee's personal acceptance of me as a person worthy of respect and his/her willingness to be my student.

It appears that most Shanghai teachers have embraced the high social expectations of their profession. A recent survey on the happiness state of secondary and primary school teachers in Shanghai shows that Shanghai teachers rate their own happiness index at an average of 73.6%. This is slightly above the general average happiness index of 69.8% in China (Jiefangribao, 2011). It is instructive, however, that the same survey shows that 86.5% think that their current work pressure is great, with the greatest source of pressure being the students' academic results (57.7%). This pressure stems from the Shanghai teachers' dedication to their profession and their accountability to the parents, school principal and education authorities. The one-child policy in China undoubtedly accentuates the stress felt by the teachers to be responsible for their students' good academic results. Evidently, the above-mentioned historical, social and cultural values and assumptions reflect the cultural scripts held by the teachers, parents and community at large for teaching in Shanghai.

Knowledge and Ability

In the course of my interacting with Shanghai teachers and observing their teaching, I am constantly impressed by their mastery of the curriculum content. Their content mastery stems from the Chinese educational philosophy that emphasises teacher-centredness, classroom-centredness and text-centredness (Cai & Jin, 2010). The spotlight is on knowledge transmission with a focus on the logical, systematic and complete aspects of knowledge contained in the subjects. Pointing out that the basic goal of schooling is to inherit the cultural legacy of the ancestors, Chinese academic Shangguan (2005) avers that 'our country's education focuses on the amount of accumulated knowledge, …only after you have established a complete knowledge

structure and have a strong foundation then can you carry out innovative activities' (p. 216).[2]

Guided by the educational ideology of Russian educator Kairov since the early 1950s, the curriculum in China, in the words of a school principal, is as follows: 'Curriculum is defined as school subjects, the subjects are defined as teaching materials, the teaching materials are defined as knowledge points, and consequently teaching is narrowly defined as the transmission of knowledge points'. The 'knowledge points' are the essential content students need to learn for the subjects and could be further divided into foundational points [jichudian], core points [hexindian], difficult points [nandian] and so on.

The focus on the knowledge points of a subject means that what is taught in teacher training institutions and schools is specialised and every point goes very deep. Liu and Qi (2006) maintain that the teacher preparation programme in China features more in-depth requirements related to academic subjects than that in the United States; this results in Chinese pre-service teachers being grounded in a more solid foundation of subject matter expertise compared to their counterparts in the United States (p. 21). In terms of classroom teaching, many Chinese teachers follow the following five steps in teaching: revise the old topic, tune into the new topic, explain new knowledge, practise and consolidate, and set assignment (Zhong & Jiang, 2004, pp. 32–35).

The emphasis on content mastery explains why the Chinese syllabi tend to be pitched at a higher level of difficulty compared to other countries. Commenting on Shanghai's PISA achievement, a school principal said: 'What's tested in PISA is what the students have already learnt; in China, the level of content difficulty is higher than in many other countries of the same grade'. This point was repeated by other principals and teachers who told me of their personal observations when they visited schools in Anglophone countries such as the United Kingdom, Germany and the United States. For example, a vice-principal said:

> Last year, I went to Germany and looked at their mathematics textbook for senior secondary school year 1. Much of the content in the textbook is what we've learnt in junior secondary year 2. This difference is relevant in explaining our PISA achievement. Our students find the PISA questions easy as they are already familiar with the concepts.

[2] Some academics are critical of the traditional teaching approach and ideology employed in China, claiming that they are a means of state control. For example, Jianguo Wu and Michael Singh argue that science teachers in China guide their students to use a 'dialectical materialist' point of view: 'This is the basic communist philosophy which holds that people's material or physical conditions of existence shape their consciousness, rather than spiritual values which are held to be distractions. This "regime of truth" is subject to political controls that shape the behaviour and belief of those working within knowledge communities, including teachers and students. It reproduces a disciplined society, albeit not without contestation, which accords with the demands of political control by the communist authorities' (Wu & Singh, 2004, p. 34). Equally critical is Chinese scholar Zhong Qi-quan who posits that the 'curriculum and instruction reform texts developed in China and even some of the recent curriculum reform plans developed by some regional governments were based on the perspectives of animal learning psychology. These texts and plans emphasised behaviourism, treating education and learning process as mere training' (Zhong, 2006, pp. 372–373).

Existing research has also highlighted the high academic standards of the curriculum subjects in China. For example, a recent study by Grattan Institute reports that schoolchildren in Australia, the United States and Europe are up to 3 years behind those in Shanghai ('E. Asian students ahead of the class', *The Straits Times*, February 18 2012). Daveya, Lian and Higgins (2007), in their comparison of a recent mathematics paper from the Chinese exam with the British equivalent (of A-level), reported that the level of the Chinese paper is higher, pitched at between A-level and further mathematics A-level.[3]

It helps that the relatively light teaching load of Shanghai teachers enables them to be content experts who spend adequate time preparing and perfecting their lessons. A survey shows that Shanghai teachers teach an average of 14.7 periods or 9.8 h a week (each period is 40 min) and spend an average of 7.8 h a week preparing lessons (Jiefangribao, 2011). This means that lesson preparation takes up almost as much time as teaching. An education officer of a district education bureau in Shanghai said to me:

> We are surprised that teachers in Singapore have to teach so many periods [about 14–16 hours a week]. That's not good if we want teachers to be research-type, reflective-type, to nurture students with thinking abilities. With too many teaching periods, teachers will become just a machine with no time and space to think.

Besides a relatively light teaching workload, other major factors contributing to Shanghai teachers' strong ability to teach the curriculum content include teacher collaboration in lesson preparation and subject research, as well as teacher training. I shall elaborate on these topics in Part III of this book.

Process and Method

Exam Techniques

The focus on knowledge acquisition in Shanghai's educational system has had a direct impact on the process and method in which knowledge is transmitted and tested. Underpinned by teacher-centredness, classroom-centredness and text-centredness, exams assess the students' knowledge of the *text* as taught by the *teacher* in the *classroom*.

To screen and differentiate the different abilities of students, exams, especially the gaokao, include tricky and difficult questions. That is why repeated practice of exam questions is important. A Chinese student shared that her teachers in

[3] The research findings have been corroborated by other observers. For example, a British headmaster who accompanied his students to visit a Shanghai school reported that his year 12 students studying maths A-level were astonished when they watched a maths lesson in which students aged 12 covered material similar to theirs (Barton, 2011). Kristof (2011) who is American also points out that the children in his Chinese-American wife's ancestral village in Southern China are 'a grade ahead in maths compared with my children, who are studying at an excellent public school in the New York area'.

China advised her as follows: 'Learning is to practise the test questions; if you complete ten thousand questions, the gaokao questions will be predictable' (Zhu, 2006, p. 110). This strategy is drawn from a Chinese saying, 'Change ten thousand times without departing from the original position' [wanbian buli qizhong]. An excellent analogy to help us understand Chinese exam-preparation techniques is playing chess – a point made at the start of the chapter. According to a Chinese scholar:

> The thinking process in exam is very similar to playing chess. The competitor needs to memorise as many chess manuals as possible, and then flexibly use them on site. The student needs to memorise many formulas and be familiar with many problem-solving techniques …. Just like an expert chess player is one because he is equipped with smart chess techniques, an expert in exams is one who has smart exam-oriented techniques. (Shangguan, 2005, p. 248)

We can identify two main exam-preparation techniques from the above. First, the teacher needs to help students master the subject content, which may come in the form of concepts, formulas and other knowledge points. Memorisation plays a big part here but it is memorisation *with understanding*; otherwise it is impossible for the student to flexibly use the memorised information later. Understanding is promoted through repeated exercises, designed to allow students to appreciate the different explanations for and solutions to each question. A Shanghai teacher told me that Chinese teachers are adept at developing their students' way of thinking to allow for 'one question, many explanations'; the aim is for students to understand the content in a thorough and in-depth manner.

Secondly, the teacher needs to help students familiarise themselves with many problem-solving techniques so that they can use them skilfully in the exam hall. Taking exams in China is like playing chess where players can anticipate but not know exactly the moves of his or her opponents. Hence, the player needs to be well acquainted with the possible moves of one's opponents and the corresponding moves he or she should take in response. Two exam strategies are particularly prevalent among Chinese teachers and students: be familiar with the exam questions and answer the questions in the shortest possible time.

The first strategy of familiarity with exam questions is achieved through repeated practice of many variations of the same problem. A Chinese academic asserts that teachers are so adept at constructing difficult questions that 'even for addition and subtraction questions for a number smaller than five, our teachers are able to produce more than 10 difficult question types, so that even children who have mastered basic calculation are able to make mistakes' (Shangguan, 2005, p. 95). The consequence, as pointed out by a Chinese student, is that every student will spend much time solving tricky, difficult and atypical questions for the exams (Zhu, 2006, p. 110). This is where the cultural value of 'painstaking learning' for the student, mentioned in the introductory chapter, comes in handy.

The need to be prepared for unexpected questions explains why rote memorisation does not and will not work for Chinese students – they need to reflect and appropriately apply what they have memorised to answer the specific exam question. A mathematics teacher in Shanghai explained to me:

> As a teacher, I think memorisation has its beneficial aspects. For mathematics, if you do not memorise the formulas and theorems, you're unable to use them. It's not enough for you to understand the reasoning, you've to memorise it, practise sufficient questions, understand the method and procedures, then the next step is to use such information flexibly. You need to have a good foundation.

Another Chinese teacher (not from Shanghai) explains the relationship between practice and learning:

> We [Chinese teachers] have always believed that the idea of 'practice makes perfect' is not about rote learning and memorisation. … Memory will lead to understanding, speed will lead to efficiency, strictness will lead to rationality, and repetition depends on variation. We try, through 'practice makes perfect', to strengthen basic training and constantly learn new things so as to achieve the purpose of innovative thinking. (Ye, 2010)

In Shanghai especially, with the introduction of more exam questions that are open ended and linked to real life under the curriculum reform, it is even more crucial for the students not to rote learn (see Chap. 11 for details of the exam format and questions). In other words, the objective of repeated practice is not rote learning and memorisation, but in-depth understanding of the content taught. This refutes the perception that Chinese students subscribe to rote learning and memorisation. Like playing chess, you cannot expect to win the game merely by memorising and repeating your moves mechanically. I shall return to the topic of memorisation for Chinese students in Chap. 5.

The second exam strategy is for students to answer the exam questions in the shortest possible time. This is similar to chess playing where players need to respond within a time limit. A Shanghai education officer explained to me that a common exam-preparation technique involves the teacher guiding students to categorise different possible types of exam questions according to the models or patterns used in each case. The students will then practise answering many types of questions across various categories, using the corresponding formula derivations or problem-solving techniques.

It is important that the teacher first devise a set of methods that allows students to recognise patterns and answer questions within the shortest time. As a Chinese academic puts it, 'the aim is to reach a stage where the student takes one look at a question and knows immediately which category the question belongs to, and quickly answers the question' (Shangguan, 2005, p. 245). I interviewed a mathematics teacher who was credited by his principal for raising the test scores substantially for the school. When I asked him for his strategy, he said: 'Teachers need to be "target-oriented": the questions should be questions students have practised before, and the thinking pattern should be one familiar to them'.

Conclusion

This chapter highlighted the outstanding characteristics of Shanghai teachers: they are teaching (chess) masters who are highly dedicated to their profession, possess strong content knowledge and are skilful in exam techniques. To return to the

analogy of water and bucket, Shanghai teachers have many buckets of water for them to supply many, many cups of water to their thirsty students. The emotion, attitude and values, knowledge and ability, and process and method of Shanghai teachers are also found in teachers in other parts of China due to a similar historical and cultural heritage.

However, there is another attribute that characterises Shanghai teachers, one that sets them apart from many of their counterparts in other parts of China. This will be the topic for the next chapter.

References

Barton, G. (2011). Shanghai secrets. http://web.me.com/geoffbarton/Site/Blog/Entries/2011/10/24_Shanghai_Secrets.html. Accessed 12 Jan 2012.

Cai, B., & Jin, Y. (2010). Woguo jichu jiaoyu gaige de xianshi jingyu yu weilai jueze [Realistic circumstances and future choices of reforms in basic education in China]. *Journal of Shanghai Normal University (Philosophy & Social Sciences Edition), 39*(1), 92–102.

Chen, G. (2009). *Kecheng shihua* [Honest words about curriculum]. Shanghai: East China Normal University.

Daveya, G., Lian, C. D., & Higgins, L. (2007). The university entrance examination system in China. *Journal of Further and Higher Education, 31*(4), 385–396.

E. Asian students ahead of the class. (2012, February 18). *The Straits Times*, p. A12.

Jiefangribao. (2011, September 8). *Shanghai tongji: Zhongxiaoxue jiaoshi zuida yali yuanzhi 'fen-fen jijiao'* [Shanghai statistics: Secondary and primary school teachers' greatest pressure originates from 'every mark counts']. http://www.wyedu.net/show.php?contentid=10851. Accessed 12 Jan 2012.

Kristof, D. N. (2011, January 18). China's winning schools? *Today*, p. 16.

Liu, P., & Qi, C. (2006). Examining teacher preparation in P.R. China and the U.S.: A preliminary comparative study. *International Education, Spring*, 5–26.

Shangguan, Z. M. (2005). *Jiaoyu de guoji shiye* [Education's international vision]. Shanghai: East China Normal University.

Shanghai Education Information Investigation Team. (2005). *Guanyu Shanghaishi zhongxiaoxue keye fudan diaocha baogao* [Regarding survey report on schoolwork burden for Shanghai secondary and primary school students]. http://www.pjky.com/UserFiles/2006-4/28/200642893312880.doc. Accessed 20 Mar 2012.

Tan, C. (forthcoming). *Confucius*. London: Continuum.

Wu, J., & Singh, M. (2004). 'Wishing for dragon children': Ironies and contradictions in China's education reform and the Chinese diaspora's disappointments with Australian education. *The Australian Educational Researcher, 31*(2), 29–44.

Ye, L. (2009). 'New Basic Education' and me – Retrospective notes from the past ten years of research. *Frontiers of Education in China, 4*(4), 558–609.

Ye, Y. (2008). Keren xiaoxue shiliang pinggu baogao [Personal teaching quality appraisal report]. *Kegai tanjiu, Issue 1*, 76–86.

Zhong, Q. (2006). Curriculum reform in China: Challenges and reflections. *Frontiers of Education in China, 1*(3), 370–382.

Zhong, Q., & Jiang, M. (2004). Xinkecheng beijingxia jiaoxue gaige de jiazhi quxiang ji lujing [The value inclination and path of teaching reform in the light of the new curriculum]. *Jiaoyu yanjiu, 8*, 32–35.

Zhu, M. (2006). *Experiencing Singapore: Educational differences between China and Singapore through the eyes of 27 overseas Chinese students*. Shanghai: East China Normal University Press.

Chapter 4
'Education Is Filling a Bucket and Lighting a Fire': The Shanghai Teacher

'Education is filling a bucket and lighting a fire.'

No, I've not misquoted William Butler Yeats. I know that Yeats said that 'Education is not filling a bucket but lighting a fire'.[1] Yeats stressed the need for teachers to light the student's fire by inspiring them to learn, explore and create. The quote suggests that 'filling a bucket' – the transmission of knowledge – is *not* what education is about.

Yeats' view, however, is somewhat contradictory to the Chinese proverb that 'To give a student a cup of water, a teacher should have a bucket of water'. The Chinese quote implies that the teacher's primary role is to quench the thirst of students who are unable to relieve their own thirst. In the previous chapter, I discussed how the Chinese quote was manifested in the Chinese teachers' emphasis on knowledge transmission, mastery of content subject and demonstration of one's competency through exam techniques.

So is education about filling a bucket or lighting a fire? My interviews and interactions with Shanghai educators suggest that the answer is both. This chapter discusses how Shanghai teachers judiciously combine the best of their tradition with new ideologies and practices under the current curriculum reform.

Filling a Bucket and Lighting a Fire

Shanghai teachers consciously strive to find compatibility between filling a bucket and lighting a fire in their teaching. On the one hand, they light a fire by promoting 'quality-oriented education' that emphasises innovative thinking and practical ability. I shall elaborate on 'quality-oriented education' in Chap. 7 and give examples of teachers who promote student-centred pedagogies, experiential learning and critical

[1] It is unclear whether Yeats was really the author of the quote. This debate is not important here since my point is on the meaning of this well-known quote rather than its authorship.

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_4, © Springer Science+Business Media Dordrecht 2013

thinking in subsequent chapters. On the other hand, the teachers in Shanghai are pragmatic enough to know that high-stakes exams are important too. Higher exam scores mean higher college entrance rates [shengxuelü] to universities, especially prestigious universities such as Fudan University and Shanghai Jiaotong University in Shanghai and Beijing University and Tsinghua University in Beijing.

Exams are not just important for students; they are essential to the teachers too because, as one teacher put it, 'the exam scores reflect how good your teaching is'. High exam scores are translated into greater rewards for the teacher as they validate his or her ability to teach well. The priority placed on exam scores entails that a mastery of subject knowledge, repeated practice and exam techniques remain important to the students. Hence, teachers need to continue to give their students cups and cups of water so that they have a ready supply of water with which to face the desert of exams without dying of thirst. A teacher said:

> In Shanghai, it's about earning a piece of paper. 'One exam to determine the rest of your life' [yikao dingzhongshen]. You'll move up if you score well, you'll move down if you don't. That's what's happening. In China the greatest source of pressure comes from the desire to gain employment. Ultimately we still need to return to academic subjects, to exam scores. You can have all kinds of activities for the students to have fun in but ultimately it's the exam that matters.

When I asked a group of Shanghai teachers how they juggle implementing innovative elective courses with preparing students for exams, a teacher smiled and said cryptically: 'suifeng zhuanduo'. That is a Chinese proverb that literally means steering the rudder according to the wind's direction. What he was implying was that he skilfully adapted his teaching strategies based on the prevailing situations and timings. Another teacher put in more plainly: 'It's up to the teacher to make reasonable arrangements, for this lesson I may have more student activities but not for another lesson that is more exam-centred. You've to make the judgment'.[2] This means that the teachers exercise their discretion to focus on the elective courses and exam subjects for different occasions or groups of students, accompanied by different teaching methods.

Besides the usual teaching strategies of giving students practice questions and monthly tests, many teachers also coach their students on weekends and cut down or eliminate innovative elective courses for graduating cohorts, despite official prohibition (also see Chaps. 2 and 3). Another strategy concerns giving homework to primary 1 and 2 students to give them a strong foundation in the curriculum content. The authorities prohibit giving homework to these two levels as they wish to reduce the students' schoolwork burden. But some teachers circumvent this rule by still

[2] Lai and Lo (2007) claim that 'In general, the officers of the Shanghai Education Bureau would make three to five supervisory visits to each school every year. Under this system, teachers are moulded to work as technicians, strictly following the directives of defined evaluation systems' (p. 62). However, this claim ignores the ability of the teachers to assemble their own tactics, measures and countermeasures to circumvent and resist official policies. As I have argued in this chapter, Shanghai teachers are adept at juggling the dual demands of carrying out curriculum reform with improving exam scores.

issuing the same amount of homework but requiring students to complete such work in school (Shanghai Municipal Education Commission, 2007a, 2007b).

By cleverly combining the introduction of innovative elective courses with providing strong content knowledge needed for the exams, the Shanghai teachers appear to have hit on a winning formula. A teacher said:

> We've had exam-oriented education in the past, in which students repeatedly practised questions. Now we've quality-oriented education, that focuses on the students' thinking and what they want to learn. So teachers combine both. For quality education, we've increased the scope and content for students to learn broadly. But we also make sure students practise the questions repeatedly.

Another Shanghai teacher added:

> Here in Shanghai, we're effectively combining theory with practice. I think Western countries emphasise experiential teaching. Experiential teaching certainly has its merits, but I think theoretical teaching, our traditional way of transmission teaching has its relevance too.

This of course does not mean that there are no tensions, contradictions and dilemmas between balancing introducing elective courses and preparing the students to ace the exams. I have elsewhere highlighted the problems faced by educators in Shanghai in their pursuit of a 'quality-oriented education' under the current curriculum reform (Tan, 2011a, 2012). But my point here is that Shanghai teachers have succeeded, to a large extent, in filling a bucket and lighting a fire. This has resulted in new forms of teaching with Chinese characteristics, as the next section will explain.

Student-Centred and Teacher-Dominated Approach

An example of an endeavour to synthesise the Chinese style of teaching with styles that are commonly associated with Anglophone societies is what I call 'student-centred and teacher-dominated approach'. This approach basically encourages student engagement through activities such as small group discussions, oral presentations, experimentation and debates while retaining the Chinese emphasis in two areas: discipline and orderliness in the classroom, and intensive teaching by the teacher.

First, Shanghai teachers, reflecting their influence by Russian educator Kairov's orientation towards systematic and logical teaching, prize teaching within a disciplined and orderly environment. While Shanghai educators are keen to encourage student-centred learning in their schools, they have no intention of turning their classrooms into 'Western' classrooms. 'We find the loose and open culture in the United States too messy', said a school principal. 'Chinese classrooms now emphasise more innovation, but it's freedom and creativity within stability. The messy way is not allowed, no strange and crazy ideas,' she added. A Shanghai teacher who is now teaching in a Singapore school expressed the same sentiments:

> Students in Shanghai are very disciplined, very different from Singapore. Here [Singapore] it can be quite messy and the students do not always listen to what the teacher is saying.

> In China, it is important for students to listen to the teacher's teaching, understand what the teacher is teaching. The number one task for students is not to misbehave in class. The parent also will not oppose the teacher on that.

Of course, the Shanghai educators' perceptions of lessons in the United States and Singapore as being messy stem from their specific cultural background. It is equally likely that educators from the United States, Singapore and other countries may find Shanghai classes too quiet and restrained. This illustrates the role of cultural scripts in shaping and influencing our views and decisions on the 'correct' form of teaching and learning.

Classroom discipline is a cultural value that is shared by the students and parents in Shanghai. The idea of the teacher retaining authority and control in the classroom is of paramount importance to Shanghai educators. This, as a teacher explains to me, puts Shanghai teachers at a distinct advantage when the teachers incorporate student-centred methods:

> Our classroom teaching is rigorous and orderly, as well as open and lively. These two are not in conflict. In Western countries, they emphasise open-minded thinking, proactive thinking, hands-on learning and debate, but they may be weak in classroom discipline. But I think to teach effectively within a stipulated time, discipline is important. So we ensure that orderly teaching remains effective, so the teachers don't have to worry about discipline, but are instead able to think hard about how to engage the students.

Another teacher points out that the key is for the teacher to let go [fangshou, meaning to loosen one's grip on things] without losing control [fangyang, meaning to allow the sheep to roam freely without supervision]. This can be achieved, she adds, when student engagement takes place within a structure. Or as a principal put it succinctly: 'We've innovation within rules'.[3]

Secondly, student-centred learning does not mean that the teacher has given up didactic teaching. Rather, what is underscored is 'intensive teaching' [jingjiang] where the teacher expertly transmits the foundational knowledge and skills to the students before allowing them to reflect and apply what they have learnt. (I shall elaborate on the centrality of intensive teaching when I discuss 'dialogue style teaching' and 'Post-tea house teaching' in subsequent chapters.) The next section on four lesson observations illustrates the practice of didactic teaching even as the teacher fosters student participation and discussions.

[3] The value of classroom discipline does not mean that there are no disciplinary problems in Shanghai schools. Some principals and teachers told me that there are also instances of students who lack learning motivation and play truant. One Shanghai principal observed that the more disciplined students tend to be those who come from better-performing schools and vice versa. But it is fair to say that Shanghai/Chinese students as well as East Asian students are generally more disciplined and motivated to study compared to their counterparts in other countries. This is due to the cultural scripts on teaching and learning. See Stigler and Hiebert (1999) for their case study of Japan.

Reflections from Lesson Observations

I observed 4 classroom lessons in three Shanghai schools: 1 lesson at the primary level, 2 lessons at the junior secondary level and 1 lesson at the senior secondary level. The 3 schools are located in 3 different districts in Shanghai. Key points from the lessons observed are highlighted. Given that the number of lessons observed is small, my aim is not to generalise any conclusions based on these observations, but to highlight observations that triangulate my research data from the interviews and literature.

Photo 4.1 A Chinese language lesson in a primary school. Notice how everyone is paying attention and the student has to stand up to answer the teacher's question

Key Points from Lesson Observation at the Primary Level

The lesson was a Chinese language class for 30 primary 5 students. The topic required students to read and analyse a comprehension passage. The teacher introduced some student-centred activities to encourage the students to participate in class. The teacher began the lesson by playing an audio recording and inviting students to answer some questions based on the recording. She then gave a mini-lecture where she explained the text to the students. She also recruited four student volunteers to read sections of the passage aloud, and invited other students to critique each student's quality of reading. Examples of comments from the students included 'He has good intonation' and 'The reading was smooth and continuous'.

The teacher also developed active and deep thinking on the part of the students by asking a lot of guiding questions. An example was 'What do you think is the difference between this paragraph and the previous one?' The teacher also related the content in the passage to the students' lives. As the passage was about sleeping, she asked the students what they did at night before they went to bed. She also attempted to inculcate moral values in the students by encouraging them to be diligent in writing down their answers, citing this proverb: 'No studying without writing' [budong maobi budushu].

The above characteristics – utilising multimedia resources such as audio recording, welcoming student participation and critique of fellow students, applying the lesson to the real world and instilling the moral value of diligence – support the current curriculum reform. This reform aims to promote quality-oriented education to 'develop every student' by fostering engaged learning, higher-order thinking and practical ability in the students.

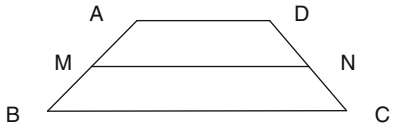
I also observed certain Chinese characteristics of teaching in the lesson. First, the teacher adopted a didactic method of instruction based on a systematic and logical exposition of the text. Secondly, the teacher was the centre of attention and remained firmly in control of the class proceedings. Although she encouraged the students to raise their hands to offer their answers in class, she decided which student could speak up. The student who was asked to share his or her answer had to stand up to answer and only sat down when the teacher gave him or her the permission. Considering that it was a primary 5 class (students were 10 or 11 years old), all the students were amazingly attentive and compliant with the teacher's instructions. At no point did any student talk without the teacher's consent.

Thirdly, although the teacher included some open-ended questions in her lesson, they were not questions that directed the students to question the teacher's teaching, critique the text or come up with individualistic and unconventional answers. Even the peer critique of their classmates' reading ability comprised compliments about how good the reading was. This could be due to the cultural value of collectivism and social harmony where any public criticism of another person is frowned upon.

Key Points from Lesson Observation at the Junior Secondary Level

I observed a mathematics lesson in a junior year 2 class and a Chinese language lesson in another junior year 2 class in the same school. Both classes have about 40 students each. The topic for the mathematics lesson was on geometry. The teacher began by posing a question to the students, as follows:

Question: MN//AD//BC. M is the midpoint of AB and N is the midpoint of DC. MN is a straight line. Prove that MN = ½ (AD + BC)



The teacher asked the students to discuss the above question in small groups of four and write down their answers on a piece of paper. Then he selected three students to take turns to display their answers on the visualiser. Each time, he asked the student to explain his answers and asked the rest of the class to critique it. None of the students managed to arrive at the correct answer.

The teacher facilitated the class discussion by asking questions such as 'What has gone wrong?' and called upon selected students to give their views. Following the students' class discussion, he corrected the common errors of the students and explained to the class the steps to arrive at the correct answer. What was striking about this lesson was the teacher's focus on getting students to reflect and solve the problem by themselves before telling them the correct answer. Throughout the lesson, the students were prompted to think logically and inferentially as a group as well as individually.

Photo 4.2 A student (standing on the *left*) presenting his answer to the class while the teacher (standing on the *right*) looks on

Like the first lesson observation, there were evidences of Chinese characteristics in the teaching. Firstly, like the students in the primary school, the students were very attentive and focused on their tasks. Even in their small group discussions, they spoke softly and did not continue to talk among themselves when the group discussion session was over. What amazed me was that all the students appeared ready to be called upon by the teacher anytime. That was obvious in how every student, when called upon, was able to answer the teacher's question immediately without any hesitation. Clearly, the teacher was fully in control throughout the lesson even as he promoted individual reflection, group discussion and class participation.

I also observed a second lesson in the same school, this time a Chinese language lesson for another junior year 2 class. The above Chinese characteristics were also present in this lesson. The topic was a passage-based comprehension. Like the

mathematics teacher, the Chinese language teacher was firmly in control and decided who could speak up in class. Far from being didactic, she posed many probing questions that promoted analytical and inferential thinking, such as 'How do you know that grandma is good in sewing from the way she sews?' She also consciously linked the lesson to other topics covered previously, such as a poem they have recited, and events from Chinese history. What struck me was the teacher's high level of content mastery. She was able to direct the students to specific paragraphs and lines in the passage without once looking at the passage for the entire lesson! That shows her superb familiarity with the text and deep knowledge of the teaching points. She also guided the students in reading strategies such as looking for keywords and linking ideas from different paragraphs together.[4]

Key Points from Lesson Observation at the Senior Secondary Level

This was a Chinese language lesson for 40 senior year 2 students. I will not elaborate on this lesson in this chapter as I have analysed it in another chapter (Chap. 16 on critical thinking). What I wish to briefly highlight here are the similarities between this lesson and the other three lessons mentioned earlier.

In terms of discipline, the students were attentive throughout the lesson. While students were encouraged to participate in class, the discussion was not free-flow but controlled by the teacher who determined who could present their answers to the class. As in the other lessons, the student who was asked to share his or her answer stood up to answer and only sat down when the teacher said so. While the teacher prompted the students to engage in peer critique, she played a dominant role in teaching the key points, guiding the students to points they missed out, and teaching them essay-writing techniques.

Conclusion

This chapter discussed how Shanghai teachers judiciously combine both student-centred and teacher-dominated approaches. Another researcher who has conducted more extensive classroom observations of mathematics teaching in Shanghai schools concludes that the teaching in Shanghai is characterised by the following: (a) teaching with variation; (b) emphasis of precise and elegant mathematical language; (c) emphasis of logical reasoning, mathematical thinking and proofing during teaching; (d) order and serious classroom discipline; (e) strong and coherent teacher-student rapport; and (f) strong collaborative culture among mathematics teachers (Lim, 2007, p. 77). Lim's observations concur with mine on Shanghai teachers combining an emphasis

[4] For further reading on the topic of teacher-dominated lesson in Shanghai, see Cortazzi and Jin (2001), Mok (2003) and Li (2009).

on understanding by teaching with variation and focusing on logical reasoning and proofing, coupled with classroom discipline and student discussions. In short, education, for many Shanghai teachers, is both filling a bucket and lighting a fire.[5]

The saying of filling a bucket and lighting a fire brings to mind the other proverb quoted in my introductory chapter: 'learn painstakingly, experience joyfully'. A reason for Shanghai's educational success is its ability to explore what is new – lighting a fire through experiential learning – while remaining anchored in what they are traditionally good at – teachers who fill the bucket for students who are ready to learn painstakingly. In subsequent chapters, we shall see this balance between what is new and old, East and West, play out again and again.

References

Cortazzi, M., & Jin, L. (2001). Large classes in China: 'Good' teachers and interaction. In D. A. Watkins & J. B. Biggs (Eds.), *Teaching the Chinese learner: Psychological and pedagogical perspectives* (pp. 115–134). Hong Kong/Melbourne: Comparative Education Research Centre, The University of Hong Kong/Australian Council for Educational Research.

Lai, M., & Lo, N. K. L. (2007). Teacher professionalism in educational reform: The experiences of Hong Kong and Shanghai. *Compare: A Journal of Comparative and International Education, 37*(1), 53–68.

Li, J. (2009). Learning to self-perfect: Chinese beliefs about learning. In C. K. K. Chan & N. Rao (Eds.), *Revisiting the Chinese learner: Changing contexts, changing education* (pp. 35–69). Hong Kong: Springer and Comparative Education Research Centre, University of Hong Kong.

Lim, C. S. (2007). Characteristics of Mathematics teaching in Shanghai, China: Through the lens of a Malaysian. *Mathematics Education Research Journal, 19*(1), 77–89.

Mok, A. C. I. (2003). *The story of a 'teacher-dominating' lesson in Shanghai*. Paper presented at the 10th biennial conference Padova on 'Improving learning, fostering the will to learn', Italy, August 2003.

Moore, C. (2010). Buckets and fires. *Educational Leadership*, *68*(1). http://www.ascd.org/publications/educational-leadership/sept10/vol68/num01/Buckets-and-Fires.aspx . Accessed 3 May 2012.

Shanghai Municipal Education Commission. (2007a). *Shanghaishi zhongxiaoxue kecheng yu jiaoxue gaige xianzhuang diaocha baogao* [Survey report of Shanghai secondary and primary school curriculum and teaching reform]. http://xbyx.cersp.com/xxzy/ztlw/200711/2002.html. Accessed 3 Mar 2012.

Shanghai Municipal Education Commission. (2007b). *Shanghaishi zhongxiaoxue ketang jiaoxue youxiaoxing qingkuang baogao* [Analysis report of the effective situation of Shanghai secondary and primary school classroom teaching]. http://xbyx.cersp.com/xxzy/ztlw/200710/1961.html. Accessed 3 Mar 2012.

Tan, C. (2011a). Framing educational success: A comparative study of Shanghai and Singapore. *Education, Knowledge and Economy, 5*(3), 155–166.

Tan, C. (2012). The culture of education policy making: Curriculum reform in Shanghai. *Critical Studies in Education, 53*(2), 153–167.

[5] It is interesting to note that an American teacher Caitlin Moore who teaches social studies at Excel Academy Charter School in East Boston, Massachusetts, also uses the same saying for an American context. She argues for the need to give students new knowledge (filling a bucket) while continuing to draw upon the wisdom students already possess (lighting a fire) (Moore, 2010).

Chapter 5
Tiger Mothers, Dragon Children

The girls barely had time as it was used to do their homework, speak Chinese with their tutor, and practise their instruments. – Amy Chua

Amy Chua is an American-Chinese famous for her recent book, *Battle Hymn of the Tiger Mother*. A self-professed 'tiger mother', she writes about her Chinese-style parenting of her own children in the United States. According to her (2011, p. 5), the Chinese mother believes, among other things, that:

- Your child must be 2 years ahead of his/her classmates.
- Schoolwork always come first and an A-minus is a bad grade.

I think all Shanghai mothers will nod in agreement with her observation. 'Hoping your son will be a dragon, your daughter will be a phoenix' [wangzi chenglong, wangnü chengfeng] is a common saying in China. It expresses the strong sociocultural desire of Chinese parents for their children to be successful in life. And success in Shanghai *must* begin with academic success. That the competition begins very early is evident in another Chinese saying: 'Do not let your child lose out at the starting line' [burang haizi shuzai qipaoxian shang]. This chapter explores Shanghai mothers and children by discussing the 2 attributes of a Chinese mother highlighted by Chua above. First, an introduction to 'tiger mothers' in Shanghai is in order.

Tiger Mothers in Shanghai

'What do you think are the main factors that contributed towards Shanghai's success in PISA?' This was a question I asked principals and teachers in every school I visited in Shanghai. Invariably, the respondents would mention parents.

'Parents devote money, time and energy to their child's education', said a vice-principal. 'As long as the child is willing to learn, more than 95% of parents are willing to spend the money, even if 70% of family expenses go to the child's learning', he added. A 2004 survey points out that the main purpose for saving in Chinese

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_5,

households is to pay for their children's education (Mok, Wong & Zhang, 2009, p. 508). Explaining the fierce competition in Shanghai, a teacher who has taught for over two decades in Shanghai said:

> In Shanghai, our thinking is that the kind of senior secondary school you attend will determine the kind of university you'll go to. This is reality. The kind of junior secondary school will determine the kind of senior secondary school, just like the kind of primary school you go to will determine the kind of junior secondary school you eventually attend. So the competition starts with kindergarten. An even earlier competition begins from the time the child is born. And even earlier is prenatal education [taijiao].

So begins the long race for the best schools and educational resources for the child.

Coming from Singapore – a tiny affluent country with very low unemployment rate – it took me some time to appreciate and imagine what it would be like to live in the most populous country in the world. 'Our country is too big, there're too many people, and gaining employment is very difficult', many Chinese told me. One Chinese even told me that he has a habit of raising his voice as 'China has too many people so you need to speak loudly to be heard'. 'There are more and more people in Shanghai', a principal said to me. 'Chinese from other provinces want their children to take exams in Shanghai, so they buy houses here and enter local universities, and make it even more competitive, more stressful for our students.'

And I didn't understand how fierce the competition was among students enrolling in the university until the Shanghai educators explained it to me. A school principal said: 'Students' exam scores could differ by as little as less than one point, especially in the case of gaokao. In the gaokao, a difference of less than one point between two students is equivalent to a difference of two grades between them!' That is why the Chinese humorously quote the saying 'to haggle over every point' [fenfen jijiao] – a modified proverb that originally refers to a person who is calculative and stingy, but is now commonly used to describe the mark-obsessed exam culture in China.

I have also begun to understand the pressure that stems from a one-child policy in China. For a start, I learnt that the family model in China is not '2+1' or even '4+1' but '6+1'. A teacher explained:

> In China, we've only one child per family, so the child has parents, and four grandparents. So six adults look after one child. So in everyday life, the aim is to nurture the child to become an adult at all cost. So the child enjoys the central position in the family. The priority is to send the child to a good kindergarten and so on. So every adult will ask the child about his studies.

A principal pointed out that many Chinese parents missed the opportunity to receive higher education due to historical and social reasons. Hence they try all means to fulfil their desires vicariously through their children. 'The parents have put all their hopes on their child and devote all their energies to the child. The child's learning, school promotion, choice of career, all determine the fate of the entire family', he added.

I felt stressed just listening to that. I am thankful that I am not an only child living in Shanghai because I do not think I can take that kind of pressure. Imagine carrying the hopes and dreams of your father and mother – no, father, mother and four grandparents – on your tiny shoulders. 'But the child has subconsciously accepted

this, it's one of our social values', a teacher said to me, alluding to the cultural script in Shanghai. In any case, the child does not need to worry. Here comes the tiger mother springing into action to ensure that her offspring fulfils the family's hopes and dreams by becoming dragons and phoenixes.

Your Child Must be Two Years Ahead of His or Her Classmates – Tiger Mother

Photo 5.1 Mathematics questions completed by a primary school student in Shanghai

Many Shanghai parents are experienced in assembling a battery of measures and countermeasures to ensure that their children have a head start in life. One strategy is to enrol the child in all kinds of enrichment and tuition programmes from a young age. A school principal told me that most Shanghai children attend enrichment courses when they are about 4 years old. This is on top of their regular lessons in the kindergarten. These courses typically include English language, mathematics, calligraphy and painting. As such, many children are already competent in the English language and mathematics when they enter primary 1, especially those in top-performing primary schools where the standard tends to be higher than other schools.

The early exposure to learning, the principal added, accounts for the impressive PISA performance of Shanghai students – the learning for them started much earlier than that of their peers in many other countries. A survey shows that 52% of children under the age of 12 in China attend extracurricular classes on weekends, and 62% of children aged 10–12 attend enrichment classes such as English, mathematics, music, art, dance and martial arts (Mok, Wong & Zhang, 2009, p. 508). Another

school principal who is a parent herself shared with me why she chose to send her lower primary child for enrichment programmes:

> My child's class has only four or five children. Each class has two teachers, the main teacher is a Westerner and the assistant is a Chinese. I have observed their lessons. They let the children play games and involve everyone. My child's school would not be able to do that, it's not possible to involve everyone in a class of over 30 students. My child also gets help in English language, in understanding.

According to her, each lesson, lasting one and a half hour, costs 150 yuan (about US$24). The average cost per term, which comprises 20 lessons, is 3,000 yuan (about US$475) – equivalent to 1 month's salary of an entry-level teacher in Shanghai.

Not all enrichment classes involve playing games. In fact, most after-school classes focus on academic subjects. A principal who has a 15-year old son told me, 'my child is taking his junior year 3 exam this year so he's receiving tuition to prepare him for the exam'. A survey shows that 42.78% of students receive home tuition (Shanghai Education Information Investigation Team, 2005, p. 14). Another survey shows that the main reason (55.1%) for parents to provide home tuition for their child is to help their child excel in their studies and be admitted into a top school; this is followed by other reasons such as the child has learning difficulties (28.3%) and the school does not teach well (13.4%) (Liao, 2001). This shows that the primary motivation of parents for enrolling the children in extra classes is not because the child is struggling in school, but because the parents want their children to be ahead of his or her peers in studies. 'Do not let your child lose out at the starting line', as the saying goes. A principal observes as follows: 'On weekends, you hardly see primary and secondary students in the parks or museums even though admission to these places is free. They are busy attending tuition classes while their parents are busy buying assessment books in the bookshops.'

Working hand in hand with the parents are various organisations outside the school that offer a buffet spread of enrichment and tuition courses. A survey of secondary and primary school students in Shanghai reports:

> There is still a market for various types of tuition. Some district educational institutes organise fee-paying tuition by grades. As they are taught by teaching-research officers, students find that attractive. The districts also organise various 'writing technique' type of tuition; some organise 'Mathematics Olympiad class', 'Thinking training class', and 'Interesting Physics' etc. academic classes. Some universities will engage well-known senior teachers to start classes, send advertisements to schools and homes, and this will have a great impact on students. (Shanghai Education Information Investigation Team, 2005, p. 7)

Another strategy for parents to ensure that their children have a head start in life is to enrol the child in a top-performing school. This can be done in two main ways: live near the school or 'school choice' [zexiao] (see chapter 6 for details of the school enrolment policy).

The first option requires the parents to live near the school as determined by the geographical proximity of the child's permanent registered address [hukou] (I shall elaborate on this in the next chapter.). An academic in Shanghai observes that for the sake of studying in a famous school, many parents spend millions to act out a 'New episode of Meng's mother selecting a neighbourhood' [xin mengmu zelin] – to first

buy an apartment, change their household's registered address and then enrol their child in the preferred school in that neighbourhood (Zhang, 2007, p. 17). But this is not an option for the average households: a typical condominium apartment in an urban district of Shanghai (where the elite schools are) is likely to cost around US$400,000.[1]

The other method of 'school choice' is popular among parents, although the Shanghai authorities do not officially approve it. The practice of school choice where parents opt for a school that is not in the neighbourhood of one's permanent registered address could start as early as at the kindergarten level – I was told that the top two kindergartens are located in the urban and wealthy district of Xuhui. Parents tend to favour kindergartens that are affiliated to popular primary schools. The prevalence of school choice is exemplified in the case of a popular primary school in an urban and affluent district; its school principal old me that 75 out of 175 primary 1 students came from the neighbourhood. This means that the majority of her primary 1 students (about 100 students) were admitted through school choice. Under this option, a parent could enrol his or her child in a school by paying a sponsorship fee to the school (Chen, 2010, p. 37), making use of one's social connections [guanxi, literally 'relation'] or putting the child through the school's internal admission selection.

First, school choice through paying a sponsorship fee does not come cheap as the cost of doing so could run into tens of thousands of yuan, depending on the amount the schools request. Even then, sponsorship fee does not automatically guarantee one's entry into the school, especially one that is hugely popular with many parents who are willing to donate huge sums of money to the school. The other strategy is using one's social connections to enrol one's child in a top school. Law (2002) points that parents in China could 'utilise the influence of their high position in the state hierarchies and send memos to, or call schools to reserve places for their children' (p. 589). However, this option is also not open to everyone; it is reserved for the privileged few that are powerful and influential. Many ordinary parents therefore turn to the third option, which is to put their child through the school's internal school admission.

It appears that many popular schools are happy to work with parents to admit students from other neighbourhoods. After all, this benefits the school since it is able to shortlist the better students. Admission is based on the school's selection criteria which may include interviews (for the applicant and even parents, in the case of admission to primary schools), assessment of the applicant's talents through aptitude tests and consideration of awards and prizes won, a review of the applicant's school results (for admission to a junior secondary school) and a series of written admission tests. The school principal of a high-performing primary school

[1] This is based on the calculation that the average cost for an apartment in the city is 30,000 yuan (about US$4760) per square metre, according to information given to me by Shanghai teachers. This means that an average-sized apartment of 80 m^2 will cost US$380,800. This is a conservative calculation. I was told that some condominium units could cost 40,000 yuan (about US$6339) per square metre. Even more prohibitive is the price of luxury properties. A recent report shows that Shanghai ranks 22nd out of 63 cities in prime international residential index average price, at 100,590 yuan (about US$16,045) per square metre (Teo, 2012). This means that a typical luxury apartment is likely to cost more than a million U.S. dollars.

told me that her school interviewed the children and their parents, assessed the children's attitude and ability through performing tasks and also considered the parents' educational background. 'All the parents of students in my school are university graduates', she told me.

Some schools also set admission test questions for the applicants. Test questions at the primary level are often questions taken from teaching materials of a higher grade (e.g. primary 2 or 3 teaching materials are used for the primary school admission test) or obtained from Olympiad-standard questions. Some of the admission test questions, as reported in a local newspaper article, are as follows (Anon 2011a):

Questions for admission to primary school (for 6 years old):

(1) [The applicant is given 6 picture cards] Arrange the following 6 cards sequentially to show how a caterpillar is transformed into a butterfly.
(2) What are the different colours of the taxis in Shanghai? Name the different taxi companies in Shanghai in accordance to the colours of their taxis.

Questions for admission to junior secondary school (for 11 years old):

(1) Some chickens and rabbits are locked in a cage, and there are altogether 100 legs. If all the chickens become rabbits, and all the rabbits become chickens, the total number of legs will be reduced by 8. How many chickens and rabbits were there originally? (See the footnote for the answer.)[2]
(2) [The applicant is given an essay about a man who wants to leave a company for another job.] Read this essay in English. If you are the boss, explain in English how you intend to persuade him to stay on in your company.

Predictably, many parents go to great lengths to prepare their children for school choice entrance tests. It has been reported that a parent enrolled her daughter in weekly Olympiad mathematics classes since primary 3, while another parent bought guide books, signed her daughter up for English language classes, submitted recommendation letters from the primary school principal and provided thick stacks of documents on the child's achievements (Anon 2011a). A Chinese academic observes that guide books such as the '"Selection of Primary School Admission Self-Assessment", "Multiple Intelligences Tests for Primary School Admission", and "Selection of Test Questions for Admission to Key-point Primary Schools" are increasingly common in bookshops' (Shangguan, 2005, p. 47). Other supplementary books such as the 'Interview Guide to Famous Primary School Admission' [mingpai xiaoxue ruxue mianshi zhinan] even go beyond academic training to deal with interview techniques (Anon 2011a). Besides school choice, a number of Shanghai parents are also concerned with 'class choice'. To these parents, it is not enough to enrol your child in a good school; it is equally important to get your child into a good class taught by an experienced and professional teacher. A vice-principal noted, "Parents will get information about the staff deployment for the new school term, and they will try all means to use 'guanxi' to arrange for their child to be taught by the best teacher in the school".

[2] The answer to the first question of the junior secondary school admission test is 18 rabbits and 14 chickens.

In a move to reduce the rush for popular schools – known locally as 'school choice fever' [zexiaore] – the Shanghai authorities have removed the term 'key-point schools' for top-performing primary and junior secondary schools, improved the educational quality of weak schools and encouraged all schools to develop their special characteristics to make them attractive to parents. The term 'key-point school' [zhongdian xuexiao] is used in China to refer to a top-performing school. A school can be a key-point school at the municipal level (most prestigious) or district level. Although the term 'key-point school' was officially used in China, its use has since been frowned upon by the authorities and was formally abolished in 2006 under the Basic Education Act that states that schools should no longer be divided into key-point and non-key-point schools (I shall return to the topic of key-point schools in the next chapter.).

But my interactions with Shanghai educators and parents reveal that the term 'key-point school' is still widely used by the masses to refer to a top-performing school. Although there is no official ranking of schools in Shanghai, many Shanghai educators, parents and general public appear well informed of the school ranking. There are also various websites that rank schools and list the 'key-point schools' at the municipal and district levels.[3] Many parents in Shanghai still persist in choosing a 'key-point school' for their child. 'All the measures to remove school choice fever is useless', a Shanghai teacher said to me, 'because every parent has a measuring tape in their hearts; they can distinguish a top school from one that is not'. A district education officer also acknowledged that 'till today, the "key-point schools" thinking still has its hold and has not been removed in society'.

An education survey done in 2005 shows that 38.6% of parents have attempted to choose a school for their child (with or without success) (Shanghai Education Information Investigation Team, 2005, p. 13). The parents' attempts to choose a top school for their child correspond to the parents' own academic qualifications. While only 18.3% of parents with qualifications of junior secondary and below chose schools for their children, 56.51% of parents with a university bachelor's degree and above 80% of parents with a master's degree and above did so (Shanghai Education Information Investigation Team, 2005, p. 14). It is apparent that the more educated the parents are, the more keen and anxious they are for their children to have an edge over other children.

Schoolwork Always Comes First and an A-Minus Is a Bad Grade – Tiger Mother

Whether or not a parent succeeds ultimately in getting his or her child into a good school, all parents expect their children to study hard. A primary 4 student in a Shanghai school shared her experiences:

> There're always assignments that never end, I still need to practice playing the piano, do writing and art on my rest days. I worked so hard and finally obtained third place in my class, yet my mother is still unsatisfied, and said I need to be number one next time. (cited in Yan, 2011. p. 28)

[3] A Google search of 'Shanghai key-point schools' or 'Shanghai school ranking' in Mandarin will bring one to many websites on the unofficial school ranking. An example is this website that lists the top 52 senior secondary schools in Shanghai: http://bbs.mplife.com/showtopic-1002848.html

The idea that 'schoolwork always comes first' is also perpetuated by school teachers. A mother I met in a school told me that her daughter has been completing her school homework *every day* since kindergarten. Her daughter is now in primary one and the school requires all parents to sign the daily homework record sheet to ensure that all homework is completed every day. But the mother was not complaining. 'My daughter is able to solve mathematics problems speedily as the school uses flash cards', she said proudly. 'The school sets a minimum standard for all students to attain, so as a parent, I've to monitor her progress and drill her everyday', she added.

The phenomenon of heavy schoolwork burden is a problem that the Shanghai government has been trying to resolve. The authorities have implemented a policy mandating that schools are not allowed to give homework to primary 1 and 2 students and should assign homework that can be completed within 1 h for primary 3–5 and within one and a half hours for junior year 1 and 2. However, many parents have resisted the policy as they see it as threatening the academic progress of their children. A vice-principal observed that many parents resorted to buying more supplementary books and giving more practice questions to their child when they found out that the school had cut down on homework. A vice-principal related to me that a parent once said to her: 'Less schoolwork really makes me worry. I've no choice but to let my child attend supplementary classes. I'm afraid that my child will lag behind other children.'

Parents are also not supportive of their children taking up or spending too much time on innovative elective courses that focus on experiential learning and research projects. This is due to the parents' concern that these activities may take time away from studying for exams, especially the gaokao. A junior secondary student I interviewed said: 'When we want to do creative things, our parents will tell us we cannot do that, all we need to do is our homework.' Another junior secondary student added: 'My parents and grandparents all told me that exam scores are the most important, and the rest are not very important.'

Echoing the student's sentiment, a teacher noted that 'parents will allow their children to take part in activities initially, but they will say stop this and that later because of the exams'. A Chinese academic teaching at the Shanghai Normal University maintains:

> Exam is not just testing the child; it is testing the parent to a greater degree. This means that exam reform is not just a matter for those in the education circle, but concerns society. Many parents do not wish to have new curriculum reform as this signifies a risk. If it is successful all will rejoice, but if fails, it is just another lesson for the country; but your own child's future could be destroyed once and for all. They do not wish to experiment with their child's future. Hence parents do not support the new curriculum reform. (Cai & Jin, 2010, p. 98)

In other words, as long as high-stakes exams remain, the fierce competition among parents for key-point (high-performing) schools and prestigious universities will remain. After all, exams direct the thinking and actions of the masses. A common saying among the Chinese is 'exam is the baton' [kaoshi shi zhihuibang] – exam functions like a conductor's baton in an orchestra that determines how the music score is to be played. A parent in Shanghai said to me agitatedly: 'The gaokao is still the baton so the education reforms are useless.'

On the one hand, the resistance from parents makes it challenging for the Shanghai authorities to implement curriculum reform that aims to shift the focus from exam preparation to innovative thinking and application to real world (see Tan, 2011a, 2012 for details). On the other hand, the parents' tactics and countermeasures such as enrolling the children in enrichment and tuition classes and buying assessment books for the children to practise have resulted in the Shanghai children being grounded in a solid foundation of content knowledge and skills. This, as pointed out earlier, has contributed to the strong performance of Shanghai students in PISA as they generally found the content of the test questions easy. In addition, the zealous efforts of all parents – including parents from low socio-economic backgrounds – also result in the children from the bottom quarter of the distribution of socio-economic background in Shanghai beating the odds to excel in studies. This explains the high percentage of resilient students from Shanghai in PISA.

Dragon Children

Photo 5.2 A primary school pupil in Shanghai studying

It is necessary, while discussing the parents, to mention the children in Shanghai as well. As residents of one of the most advanced and international cities in China, Shanghai students have been socialised into a culture that makes them knowledgeable about the world, well travelled, IT-savvy and relatively fluent in English. That they are well read about international affairs is pointed out in a survey that shows that over 70% of Shanghai students are concerned with hotspot issues and political and economic situations in and outside the country (Lou, 2001).

They are also strong in meta-cognitive strategies such as understanding, remembering and summarising. These qualities have helped the Shanghai students to perform well in PISA. In his research, Areepattamannil (2012, March) reported that meta-cognitive strategies such as understanding, remembering and summarising were positively associated with Shanghai students' mathematical literacy in the 2009 PISA. This finding refutes the perception that the Chinese students are rote learners and lack understanding in learning. This perception is related to what is known in the literature as the 'paradox of the Chinese learner'. As explained by John B. Biggs, the paradox is that 'westerners saw Chinese students as rote learning massive amounts of information in fierce exam-dominated classrooms – yet in international comparisons, students in the Confucian heritage classrooms greatly outperformed western students learning in "progressive" western classrooms' (as cited in Chan & Rao, 2009, p. x).

In solving the paradox, it is important to note that memorisation and repeated practice for the Chinese students do not necessarily mean that they are learning by rote or that they lack deep understanding of the subject matter. On the contrary, empirical research has shown that memorisation and repetition could be used as part of a strategy for the Chinese students to achieve deep understanding, logical thinking and strong application.[4]

Shanghai students are also competitive, highly motivated, hardworking and pragmatic. A Shanghai mother who is now a teacher in a Singapore school thinks that Shanghai children are tougher than Singapore children in being adaptable and competitive. 'They have strong psychological quality and can take much pressure', she said, 'because they have gone through countless challenges, are used to taking exams since young'. It is evident that Shanghai students share their parents' prioritisation of academic excellence. A junior secondary student I spoke to, when asked about her views on tuition, said: 'I think it's very important for me to have tuition. Some subjects are difficult, like mathematics. You cannot do it by yourself. A tutor can help you.' A survey shows that close to half of all junior secondary students (48.8%) spend between 2 and 4 h on homework every day (Lu, 2005).

A survey of secondary students in Shanghai shows that the greatest motivation for them to study hard is to get a good job in the future (53.6%). When asked to rank their ideal job from a list of 21 options, the top 3 choices are professions that are high-paying: a manager of foreign-funded enterprises, a professional posted overseas for work and a doctor (Anon 2001). Another survey of Shanghai youth on life aspirations shows that the most popular type of aspiration is career aspiration (55.9%), rather than aspirations relating to relationships or other aspects of their lives (Wang 2011, November 5). Commenting on the pragmatic aspirations of Shanghai youth, experts aver that this is mainly because Shanghai youth live in a society that is very competitive; therefore, they need to devote all their energy to obtain high exam scores to obtain better opportunities and not disappoint their parents (Wang 2011, November 5). This was corroborated in my interviews with 20 junior secondary students. When

[4] For further readings on the paradox of the Chinese learner, see Biggs (1996), Biggs and Watkins (1996), Chan and Rao (2009), Huang and Leung (2004), Jin and Cortazzi (2006), Kember (2000), Marton, Wen and Wong (2005) and Morrison (2006). I should clarify that the paradox is not confined to Chinese students from Shanghai or other parts of China, but to Chinese learners in general.

asked about their aspirations, most answers reflected their practical concerns such as ‘to be admitted into a good university’, ‘to be a doctor’, ‘to be a businessman’ or simply ‘to be a successful person’.

A side effect of living in a fiercely competitive society is that Shanghai students are under immense studying stress. A survey informs us that the main sources of psychological pressure for primary and secondary students in Shanghai are parental expectations (58.87%), self-expectations (43.05%) and fear of the future (41.85%) (Lu, 2005).

Conclusion

Shanghai’s educational success takes place in a highly competitive society where parents and students value academic achievements and channel most of their energies to achieving that goal. The strategies adopted by many Shanghai parents reflect their logics, values and agendas as they seek to resist, interfere with and circumvent official policies. Our discussion of Shanghai parents and children illustrates the central role of cultural scripts in shaping human behaviour and outcomes.

Underpinned and surrounded by cultural beliefs and assumptions, the tiger mothers in Shanghai will continue to ensure that ‘schoolwork always comes first, an A-minus is a bad grade, and your children must be 2 years ahead of their classmates in mathematics’.

References

Anon. (2001). Guanyu dangqian Shanghai zhongxueshen sisiang zhenzhi zhuangkuang de diaocha baogao [Regarding the survey report of current situation for Ideology and Politics for Shanghai secondary school students]. *Lunwenwang*. http://www.lw23.com/paper_72629611/. Accessed 8 Feb 2012.

Anon. (2011a). *Xiaoshenchu mianshizhong de ‘pianti’ zhenneng fajue rencai?* [Can ‘tricky questions’ really help to discover talent in the interview for junior secondary admission?]. http://www.gaofen.com/article/141439.htm%20Page. Accessed 23 Jan 2012.

Areepattamannil, S. (2012, March). *Influences of metacognitive and self-regulated learning strategies for reading on mathematical literacy of adolescents in four high-performing education systems*. Paper presented at the CRPP Research Seminar, National Institute of Education, Singapore.

Biggs, J. (1996). Western misperceptions of the Confucian-Heritage Learning culture. In D. A. VWatkins & J. B. Biggs (Eds.), *Teaching the Chinese learner: Psychological and pedagogical perspectives* (pp. 46–47). Hong Kong/Melbourne: Comparative Education Research Centre, The University of Hong Kong/Australian Council for Educational Research.

Biggs, J., & Watkins, D. (1996). The Chinese learner in retrospect. In D. A. Watkins & J. B. Biggs (Eds.), *Teaching the Chinese learner: Psychological and pedagogical perspectives* (pp. 269–285). Hong Kong/Melbourne: Comparative Education Research Centre, The University of Hong Kong/Australian Council for Educational Research.

Cai, B., & Jin, Y. (2010). Woguo jichu jiaoyu gaige de xianshi jingyu yu weilai jueze [Realistic circumstances and future choices of reforms in basic education in China]. *Journal of Shanghai Normal University (Philosophy & Social Sciences Edition), 39*(1), 92–102.

Chan, C. K. K., & Rao, N. (2009). The paradoxes revisited: The Chinese learner in changing educational contexts. In D. A. Watkins & J. B. Biggs (Eds.), *Teaching the Chinese learner: Psychological and pedagogical perspectives* (pp. 315–349). Hong Kong/Melbourne: Comparative Education Research Centre, The University of Hong Kong/Australian Council for Educational Research.

Chen, J. (2010, March 1). Government to increase spending on education. *China Daily*. http://www.chinadaily.com.cn/china/2010-03/01/content_9515384.htm. Accessed 2 Jan 2012.

Chua, A. (2011). *Battle Hymn of the Tiger Mother*. London: Bloomsbury.

Huang, R., & Leung, K. S. F. (2004). Cracking the paradox of the Chinese learners: Looking into the Mathematics classrooms in Hong Kong and Shanghai. In L. Fan, N.-Y. Wong, J. Cai, & S. Li (Eds.), *How Chinese learn mathematics: Perspectives from the insiders* (pp. 348–381). Singapore: World Scientific Publishing.

Jin, L., & Cortazzi, M. (2006). Changing practices in Chinese cultures of learning. *Learning, Culture and Curriculum, 19*(1), 5–20.

Kember, D. (2000). Misconceptions about the learning approaches, motivation and study practices of Asian students. *Higher Education, 40*(1), 99–121.

Law, W.-W. (2002). Legislation, education reform and social transformation: The People's Republic of China's experience. *International Journal of Educational Development, 22*(6), 579–602.

Liao, D. (2001). *Shanghai diqu zhongxiaoxue youchang hiajiao de diaocha baogao Shanghai shi jaiokeyuan pujiaosuo Shanghaishi jichu jiaoyu diaochadui* [Survey report of paid tutoring for Shanghai secondary and primary school students, Shanghai basic education investigation team of Shanghai Academy of general education. Shanghai Educational research]. http://www.lw23.com/paper_67117021/. Accessed 8 Feb 2012.

Lou, J. (2001). *2001 nian Shanghai gaoxiao xueshen sixiang zhenzhi zhuangkuang diaocha baokao* [2001 Survey report of Shanghai higher institution students' ideology and politics situation]. http://www.lw23.com/paper_71550961/. Accessed 8 Feb 2012.

Lu, C. (2005). Shanghaishi zhongxiaoxue sushi fazhan xianzhuang yanjiu baogao [Research report of current situation of the quality development of Shanghai secondary and primary school students]. *Xuhiu jiaoshiwang*. http://tpd.xhedu.sh.cn/cms/data/html/doc/2005-09/02/54569/index.html. Accessed 8 Feb 2012.

Marton, F., Wen, Q., & Wong, K. C. (2005). 'Read a hundred times and meaning will appear. . .': Changes in Chinese University students' views of the temporal structure of learning. *Higher Education, 49*(3), 291–318.

Mok, K. H., Wong, Y. C., & Zhang, X. (2009). When marketisation and privatisation clash with socialist ideals: Educational inequality in Urban China. *International Journal of Educational Development, 29*(5), 505–512.

Morrison, K. (2006). Paradox lost: Towards a robust test of the Chinese learner. *Education journal, 34*(1), 1–30.

Shangguan, Z. M. (2005). *Jiaoyu de guoji shiye* [Education's international vision]. Shanghai: East China Normal University.

Shanghai Education Information Investigation Team. (2005). *Guanyu Shanghaishi zhongxiaoxue keye fudan diaocha baogao* [Regarding survey report on schoolwork burden for Shanghai secondary and primary school students]. http://www.pjky.com/UserFiles/2006-4/28/200642893312880.doc. Accessed 20 Mar 2012.

Tan, C. (2011a). Framing educational success: A comparative study of Shanghai and Singapore. *Education, Knowledge and Economy, 5*(3), 155–166.

Tan, C. (2012). The culture of education policy making: Curriculum reform in Shanghai. *Critical Studies in Education, 53*(2), 153–167.

Teo, E. (2012). S'pore ranks high on luxury property list. *The Straits Times*, August 18, p. C4.

Wang, W. (2011, November 5). 'Shanghaishi qingshaonian mengxiang xianzhuang diaocha baogao' jinfapu ['Survey report of current situation of Shanghai youth's aspirations' released today]. *Xinming wanbao*. http://www.news365.com.cn/xwzx/jykjws/201111/t20111105_3173355_1.htm. Accessed 8 Feb 2012.

Yan, W. (2011). *Jiaxiao heli youxiao tishen shaonian ertong de daode siyang* [Family-school joint effort to effectively raise the moral attainment of youths and children]. Unpublished master's dissertation, National Institute of Education, Nanyang Technological University.

Zhang, M. (2007). *Dangqian jiaoyu zhen zaoyu jiduo wunai – jiaoyu wenti tiaocha zhi 'jiaoyu baji'* [Some frustrations facing education today – 'Eight records of education' from survey on educational problems] In Q. Zhong & G. Wu (Eds.), *Fansi zhongguo jiaoyu* [Reflections on education in China] (pp. 10–24). Shanghai: East China Normal University Press.

Part II
The Policy

Chapter 6
‘Chinese-Style’ Education for All

‘Teacher Chen, we’ve prepared a delicacy for you’, the school principal said to me enthusiastically.

I looked at the dish. Rolls of meat arranged in a circle. It didn’t resemble anything I’ve eaten.

‘It’s snake meat, a special dish that you can only get here’, he said proudly.

I stared at the dish and imagined the snake springing to life.

‘Oh, how special… Is it farmed or caught from the wild?’ I asked, hoping that it was farmed and therefore slightly more palatable.

‘It’s caught from the wild. It’s hard to catch, but I’ve asked the restaurant owner to prepare it especially for you. Don’t worry, it’s not poisonous.’ He assured me.

‘Ha, ha, thank you….’ I laughed nervously. I stared at the meat again and wondered what the snake had eaten before it was caught.

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_6, © Springer Science+Business Media Dordrecht 2013

Photo 6.1 The rural landscape of Chongming island

Eating snake meat was one of the most memorable experiences I had when I visited Chongming island. Chongming is special – it is separated from mainland Shanghai and is the only county in Shanghai (the rest are districts). I saw a different Shanghai when I arrived at Chongming after more than 2 h of travel by car from the city. I was greeted by fresh air, stretches of farmland and quaint low-rise houses enveloped by a rustic countryside charm. I also tasted the sweetest tomatoes, fresh from the farm. The children appeared adorable with their ruddy cheeks, perhaps due to many hours spent under the sun.

Many teachers teaching in Chongming have been residents there for decades. A number of younger teachers, I was told, left Chongming for mainland Shanghai for better wages and living conditions. I met a young teacher who had taught in a Chongming school for 7 years. He told me he was happy in Chongming. When I asked him if he was also planning to move to a school in the city, he said, 'The average cost for an apartment in the city is 30,000 yuan (about US$4760) per square meter, compared with 10,000 yuan (about US$1588) per square meter here.' He shook his head and added, 'I could never earn enough to pay for the apartment on a teacher's pay for the rest of my life.'

While the county is distinctly different from mainland Shanghai, what surprised me was that the schools in Chongming look like any school on mainland Shanghai. The village school I visited was one such example. The school occupies a sprawling 2 ha of land, covering over 6,000 m^2. The school facilities include a 250-m jogging track, computers and multimedia equipment. Of the 50 teachers, about one-third are senior teachers, while the rest are young teachers below the age of 35. Reflecting the Shanghai authority's curriculum reform ideology, the school's mission is to 'practically implement quality education, to promote second phase curriculum reform' (from the school website).

Photo 6.2 A village school in Chongming island

My interviews with the principal and teachers revealed that schools in Shanghai, whether urban or rural, are well taken care of by the authorities. A teacher of a village school said, 'Shanghai's school infrastructure is better than other parts of China, we've better teaching conditions.' Teachers in the school are also given many opportunities for training and professional development. A senior teacher who has taught for 30 years in the rural school explained:

> Every week, for two hours, teachers teaching the same subject will come together to discuss, share good ideas, their problems. This allows the teachers to prepare lessons in a more in-depth manner. … The teacher training college in the county will also bring the teachers together to learn and exchange ideas. For example, our school currently focuses on the theme on 'creating effective lessons', so we organise teacher essay competitions, lesson plan competitions, classroom activities, and so on.

The Shanghai authorities have implemented a number of measures to help rural and weak schools under the ideologies of educational balance [jiaoyu junheng] and fair development [gongping fazhan]. In the case of Chongming, the county's education bureau has been carrying out the Shanghai Municipal Education Commission's plan to strengthen the construction of junior secondary schools since 2003. The measures introduced include improving the school management ideology, educational quality, infrastructural transformation and teacher development.

The Chinese vision of 'education for all' – to provide equal learning opportunities for all students – explains, to a large extent, why Shanghai has the world's high percentage of resilient students in PISA 2009. The goal of a balanced education was a reason commonly cited by many Shanghai educators when I asked them for the

factors that contribute towards Shanghai's stellar performance in PISA. A school principal said:

> We've balanced education. The difference in scores between top students and weak students is very small in PISA. This is because at the level of basic education since the 1990s, there has been an equal allocation of resources to ensure that all schools meet the minimum standards. All schools are taken care of, whether they are village schools or city schools.

The deputy director of Shanghai Municipal Education Commission, Yin Houqing, describes the policy in Shanghai as 'using "Chinese style" wisdom and methods to crack the question of balanced development' (Shen, 2011a, p. 20). The term 'Chinese style' is apt for two reasons. First, it highlights the fact that the challenges to and solutions for educational balance and equality are intricately linked to local conditions. Secondly, it draws our attention to the role of cultural scripts – the cultural beliefs and assumptions – in influencing the conception and implementation of educational policy. The next two sections delineate a key educational challenge in Shanghai and the authorities' responses to promote educational balance and equality.

A Key Challenge in Shanghai

Before we look at the measures taken by the Shanghai authority to promote equality balance and equality, it is necessary to understand a key challenge in the Chinese context that prompted 'Chinese-style' educational policies.

There is perhaps no greater motivation and pressure to obtain a tertiary education than in China – the largest educational system in the world. I have explained in Chap. 5 how historical, cultural and social factors have led to many Chinese parents clamouring for a good university degree for their children. In developed cities such as Shanghai where the higher education enrolment rate is high at around 80%, the competition is not so much for a place in any university or institution of higher education but a top university such as Fudan University and Beijing University. A common Chinese saying, 'One exam to determine the rest of your life' [yikao ding zhongshen], encapsulates the almost omnipotence of high-stakes exams in China.

While Chinese parents have always been keen to enrol their children into elite schools, their zeal doubled in the 1990s when the Chinese government designated several high-performing primary and secondary schools as 'key-point schools' or 'focused schools' [zhongdian xuexiao]. The government's objective was to raise the overall educational standards in China by focusing on some quality schools. In fact, the term 'key-point' [zhongdian] comes from the Chinese expression 'zhongdian jiaqiang' which means to 'focus on strengthening' these schools. These schools had been selected on the basis of their good academic results, more capable teachers and richer educational resources. Although the authority's intention was to improve schooling in China through the leadership of the 'key-point schools', the unintended effect was to create elitism where these 'key-point schools' became the popular schools that all Chinese students aspire to enrol in. Consequently, there have been increased schoolwork burden for the students in their bid to qualify for a key-point

school, more intense competition and greater obsession with exam scores. The quest to enter a key-point school was analogous to 'a thousand soldiers and horses crossing a single-plank bridge' [qianjun wanma guo dumuqiao].

Aware of the social problems generated by school choice fever, the Chinese/Shanghai authorities implemented several measures to promote educational equality and balanced development from the 1990s onwards. The measures converge on narrowing the disparity between high-performing and low-performing schools.

Measures to Promote Educational Balance and Equality

Neighbourhood Counterpart Enrolment

The first measure taken by the authorities was to remove the competition for admission into key-point schools based on high-stakes exams. In 1998, the Ministry of Education issued a document entitled 'Some opinions for every school regarding strengthening the construction of weak schools in big and middle-size cities to carry out the basic phase of education' (Ministry of Education, 1998). The document states that the primary school graduating exam for admission into junior secondary schools will be abolished, and primary school graduates' admission into a junior secondary school will henceforth be based on the geographical proximity of the student's permanent registered address [hukou] to the school.

Known as 'neighbourhood counterpart enrolment' [jiujin duikou ruxue], a primary school will be paired up with one or more junior secondary schools or 'counterpart schools' [duikou xuexiao] in the vicinity. Likewise, a junior secondary school will be paired with one or more primary schools in the vicinity. Primary students will gain automatic admission into the counterpart junior secondary school. Although the policy to replace the primary school graduating exam with neighbourhood admission into junior secondary schools was officially announced in China in 1998, it appears that Shanghai had already implemented it in 1994 (Cheng, 2011). What this policy hopes to achieve is to remove unhealthy school competition among schools, reduce students' heavy workload and exam stress, broaden the community's focus beyond the exam to the student's comprehensive quality and, ultimately, alleviate the parents' school choice fever.

No More Key-Point Schools

Secondly, the Chinese government attempted to reduce the gap between elite schools and weak schools by removing the official designation 'key-point schools' for primary and junior secondary schools (schools within the compulsory education stage). The Basic Education Act in 2006 states that the government aims to pursue

educational equality and balanced development at the compulsory education stage by not allowing schools to be divided into key-point and non-key-point schools. Former key-point senior secondary schools, as well as some other senior secondary schools, are henceforth known as 'Experimental Demonstration Schools' [shiyanxing shifanxing xuexiao]. The change of terms for top-performing senior secondary schools signifies that these schools are good not because the government is focused on strengthening them (the original meaning of 'key-point'). Rather, these schools stand out in offering 'experimental' courses and 'demonstrating' to other schools how innovation and excellence can be achieved.

Helping Weak Schools

Thirdly, the authorities carried out measures to improve the educational quality of weak schools, particularly schools in the rural areas. To date, the Shanghai authority has spent 136 billion yuan (about US$21 billion) to complete 639 infrastructural projects for primary and junior secondary schools and build 400 kindergartens (Shanghai Municipal Education Commission, 2011b). The Shanghai authority also assigns teachers with tertiary education to teach in the rural schools for a prescribed period so as to deal with the shortage of teachers in the remote areas (Shen, 2007, p. 33).

A noteworthy policy initiative launched by the Shanghai Municipal Education Committee in 2007 was the 'entrusted management' [weituo guanli] for weak schools at the basic education level. This model entrusts urban districts in Shanghai, which tend to have more developed and richer educational resources, to manage the relatively weak schools in the outskirts and rural districts. It may also involve a high-performing school assisting a low-performing school in the same district. The purpose is to transfer high-quality resources from the city to suburban areas and reduce the inequality in educational resources between schools. This is achieved by infusing the progressive educational ideology and methods of high-performing schools into the weak schools, thereby speedily raising the weak schools' standards in school management, teaching and learning. The pairing also contributed towards capacity building in the weak schools; it has been reported in 2007 that 50.6% of the weak junior secondary schools in Shanghai that were involved in the entrusted management programme had more than 5% increase in the number of senior teachers, and 29.26% of the same schools had more than 10% increase in the number of senior teachers (Shen, 2007, pp. 33–34).

The entrusted management comprises two formats. The first is to replace the school principal in the weak school with a new principal and construct a new school leadership team and teaching force. The second option is not to replace the principal but to strengthen or adjust the existing leadership team and send good teachers to assist in the teaching. To ensure quality assurance, the process of entrusted management is monitored and evaluated by the Shanghai Education Evaluation Institute periodically, at the initial, middle and final stage.

Since 2007, the district education bureaus of urban districts such as Pudong and Jingan have entrusted many high-performing schools in their districts with the management of weak schools in rural districts such as Chongming county and Songjiang district. A vice-principal from Jingan district shared with me that her school has partnered with a few schools to manage a weak rural primary school in Qingpu district. They share resources and train the teachers in courses such as English, mathematics and computer skills. It has been recently reported that in the third round of entrusted management, 46 top schools have been paired with 46 weak schools in the suburban areas (Jiefangribao, 2011).

An example of a success story is Jiangqiu secondary school in the suburban Jiading district that is managed by Caoyang Secondary School in the urban Pudong district. Caoyang School brought in its experts to diagnose the weaknesses of Jiangqiu School through observing lessons. It then helped to set standards for classroom teaching, created 'subject schoolwork portfolios' for Jiangqiu and specially designed subject schoolwork to reduce the students' burdens. After 4 years of hard work, it was reported that Jiangqiu School's educational quality has risen from among the bottom to become among the top ten in the district (Jiefangribao, 2011). Another case study is Zhoupu Secondary School, a top-performing senior secondary school which has partnered with a weak school in the same district (Huadong shifang daxue fushu zhongpu secondary school, 2008). The partnership takes the form of administrative management, IT training, school subject research and teaching graduating classes. Zhoupu School reported that the partnership has enabled the weak school to improve its academic results, teaching and moral education.

Another policy initiative that is worthy highlighting is the 'bundled school management' [kunbang banxue] where the Shanghai Municipal Education Commission selects a high-performing school to replicate its academic and administrative success in a newly built school. This means both schools will be 'bundled' together by having a unified teaching force, curriculum, assessment system and so on. This ensures that the new school will not have to start from scratch but will be able to become a top school in the shortest possible time. An example is a new school in the suburban Minhang district, which has been bundled with a top school in urban Luwan district (Shen, 2011a, p. 21). Both schools share the same name (Xiangming) and are managed by the same principal, teaching force, educational ideology, teaching standards, curriculum standards, curriculum design, training and assessment.

Quota Allocation Policy

The Shanghai authorities also increased the chance for more students to be admitted into high-performing senior secondary schools by introducing the quota system in 2007. Known as 'quota allocation policy' [minge fenpei fa], selected high-performing senior secondary schools (known formally as 'experimental demonstration schools') will set aside a quota of 18% of the school's vacancies to be equally distributed to all junior secondary schools, based on the number of graduating

junior secondary students in each district. A high-performing school will accept students who have indicated their desire to be admitted into that school as long as they are among the top performers in their respective school and that the number to be accepted from that school is within the quota allocated (Shanghai Municipal Education Commission, 2011d). This means that top students of relatively weak junior secondary schools have an equal or even higher chance of being admitted into popular senior secondary schools compared to their counterparts in a high-performing junior secondary school.

Direct School Admission

Another measure is the move by the Shanghai authorities to allow some senior secondary schools and higher institutions greater discretion to admit a portion of students directly based on the school's own selection criteria (for details, see Shanghai Jiaoyu Xinwenwang, 2011). The objective by the authorities is to reduce the 'one exam will determine the rest of your life' mindset and to recognise the nonacademic talents of students. Schools can recommend outstanding students to the high-performing schools; students who are not recommended by their schools can also take the initiative to recommend themselves. The selection for direct school admission is determined by the respective institutions and is not necessarily dependent on the students' zhongkao and gaokao results. Instead the consideration may be on the students' talents, such as in the sciences, sports or arts. This initiative to go beyond the students' academic performance to recognise and reward an all-rounded development is part of the government's drive to shift from an exam-oriented education to a quality-oriented education – a topic I shall elaborate on in the next chapter.

Conclusion

Credit should be given to the Shanghai authorities for their bold and distinctive policy initiatives such as entrusted and bundled management models. These measures reflect 'Chinese-style' wisdom and methods, cracking the question of balanced development in two main ways.

The first manifestation of Chinese-style wisdom in maintaining a balanced development is seen in the Shanghai authorities' response to sensitive local conditions. The official measures are triggered and necessitated by the Chinese's pressing demand for a good university education; this demand is fueled by the nation's one-child policy, limited resources for 1.3 billion people and a highly competitive environment where academic achievement is perceived to make or break one's future. To ensure continual harmony and prevent any social unrest in China, the authorities are cognisant of the need to respond to the masses' demand by promoting educational balance and equality.

Secondly, the measures reflect the Chinese characteristics of top-down initiative, centralised control and close monitoring by the authorities. This ensures that the policies mandated by the authorities are smoothly carried out by the schools with a relatively high degree of conformity compared to other countries. For example, schools involved in the entrusted management model, including the high-performing schools tasked to assist the weak schools, are accountable to the authorities for the progress of the weak schools. The monitoring mechanism, which includes regular reports and evidence of improvements from the weak school, ensures compliance and effectiveness of the measures.

Of course, the above does not mean that all the measures to promote educational balance and equality are successful and are not met with public resistance. (For a useful reading of public resistance and criticisms to the measures, see Gu, 2007) Among the measures, the authorities' endeavour to make high-performing schools less attractive by prohibiting the use of the term 'key-point schools' and introducing school admission through neighbourhood attendance has not been effective. As highlighted in the previous chapter, parents have devised their own countermeasures to enrol their children into popular schools. The autonomy given to some schools and universities to admit students based on their own admission criteria has also not promoted educational balance and equality to a large extent. This is because despite the intention to recognise students with nonacademic talents, the admission criteria of these schools and universities often include testing the students' knowledge of curriculum subjects or considering the students' exam scores as one of the selection yardsticks. This means that a student still needs to be good academically before he or she is accepted by the school/institution.

On the other hand, the measures to make weak schools more attractive have achieved some success. Weak schools, including rural schools, have been given substantial support to improve their standards, in the areas of infrastructure, school management, curriculum, pedagogy, teacher quality and other educational aspects. The success of 'Chinese-style' education for all explains, to a large extent, why Shanghai students show high resilience in PISA 2009. As noted by a principal: 'Shanghai's good results in PISA are linked to Shanghai's equal development; our curriculum reforms emphasise educational balance, to help weak schools.'

Students from Chongming island should be proud that they are valued and assisted as much as their peers in mainland Shanghai. Also, Chongming students have something they can be proud of: snake meat, which, by the way, tasted fantastic.

References

Cheng, K.-M. (2011). Shanghai: How a big city in a developing country leaped to the head of the class. In M. S. Tucker (Ed.), *"Surpassing Shanghai": An agenda for American education built on the world's leading systems* (pp. 21–50). Cambridge: Harvard University Press.

Gu, M. (2007). Jiaoyu yousi lu [Record of educational concerns]. In Q. Zhong, & G. Wu (Eds.), *Fansi zhongguo jiaoyu* [Reflections on education in China] (pp. 3–9). Shanghai: East China Normal University Press.

Jiefangribao. (2011, September 8). *Shanghai tongji: Zhongxiaoxue jiaoshi zuida yali yuanzhi 'fenfen jijiao'* [Shanghai statistics: Secondary and primary school teachers' greatest pressure originates from 'every mark counts']. http://www.wyedu.net/show.php?contentid=10851. Accessed 12 Jan 2012.

Ministry of Education (1998). *Guanyu jiaqiang dazhong chengshi weibo xuexiao jianshe banhao yiwu jiaoyu jieduan meiyisuo xuexiao de ruogan yijian* [Some opinions for every school regarding strengthening the construction of weak schools in big and middle-size cities to carry out the basic phase of education]. http://www.law-lib.com/law/law_view.asp?id=68140. Accessed 12 Jan 2012.

Shanghai Jiaoyu Xinwenwang. (2011). *2012 Shanghai ge gaoxiao zizhu zhaoshen fangan luxu gongpu gequ tes* [Successive announcement of 2012 Shanghai higher institutions' autonomous student recruitment plan: each with own special characteristics]. http://shanghai.eol.cn/shzzzs_12040/20111205/t20111205_715299.shtml. Accessed 7 Feb 2012.

Shanghai Municipal Education Commission. (2011b). *Shijiaowei yingfa 'Shanghaishi jichu jiaoyu gaige he fazhan 'shierwu' guihua* [Municipal education commission issues the 'Twelfth Five' plan for Shanghai basic education reform and development]. http://www.shanghai.gov.cn/shanghai/node2314/node2319/node12344/u26ai30352.html. Accessed 10 Feb 2012.

Shanghai Municipal Education Commission. (2011d). *Shanghaishi jiaoyu weiyuanhui gaunyu zhuanfa 'Shanghaishi jiaoyu kaoshiyuan guanyu 2011nian benshi zhongdeng xuexiao gaozhong jieduan zhaosheng kaoshi gongzuo de shishi yijian' de tongzhi* [Notice by Shanghai Education Commission regarding forwarding 'Implementation opinion by Shanghai Education Exam Board regarding the exam work for senior secondary student enrolment in 2011']. http://www.shmec.gov.cn/html/xxgk/201103/420052011004.php. Accessed 15 Mar 2012.

Shen, Y. S. (2006b). *Kecheng pingjia* [Classroom appraisal]. Beijing: Beijing Normal University Press.

Shen, Z. (2011a). Shei tuoqile shanghai jichu jiaoyu de dipan [Who has held up the chassis of Shanghai basic education?]. *Shanghai Education, 5*(3A), 20–21.

Chapter 7
'To Develop Every Student': Towards Quality-Oriented Education

I'm sitting in the office of a Shanghai principal, chatting and drinking Chinese tea with him. His popular school is located in the business district in Shanghai. His office offers a panoramic view of the imposing skyscrapers of commercial buildings. Looking out of the window, he added, 'Professor Chen, do you know there are hundreds of banks and financial offices out there? So near my school. My dream is to for my school to collaborate with these companies so that my students can be enterprising and have real world skills.'

The principal epitomises the vision of many Shanghai principals to develop their students' comprehensive quality beyond mere acquisition of textbook knowledge. 'To develop every student' [weile meiyige xuesheng de fazhan] is a buzzword that is often repeated by the Shanghai educators I met in Shanghai. It comes in variant forms: 'to develop the lifelong learning of every child' [weile meiyige haizi de zhongshen xuexi], 'human-oriented' [yiren weiben], 'oriented towards student development' [yi xuesheng fazhan weiben] and 'student as the subject' [yi xuesheng wei zhuti].

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_7, © Springer Science+Business Media Dordrecht 2013

Photo 7.1 The horizontal Chinese characters above the door of this Shanghai school read 'All for the sake of the student' [yiqie weile xuesheng]. The vertical characters on the left read 'Educating humans is the priority' [yuren weixian] and those on the right read 'Student-oriented' [xuesheng weiben]

The ubiquity of these student-centric terms – hitherto foreign to Shanghai (as well as China) before the curriculum reforms – exemplifies the overarching goal of *quality-oriented education* [suzhi jiaoyu]. It signals a major shift in educational ideology, from an exam-oriented education that has long dominated the educational landscape in Shanghai. 'To develop every child' captures succinctly the moral vision of the Shanghai Municipal Education Commission and encompasses the various education policy initiatives launched under the current curriculum reform. This chapter elucidates this moral vision that underpins the curriculum reform in Shanghai.

Quality-Oriented Education

The term 'quality' [suzhi] was first officially mentioned in 1985. A document on the 'Decision of the Chinese Communist Party's Central Committee on reform of educational system' states: 'In the entire process of education system reform, we need to firmly remember that the basic purpose of reform is to raise the quality of the people, to produce more talent, produce good talent' (Anon, 1985).

The subsequent official discourse highlighted the contrast between quality-oriented education and exam-oriented education. The authorities asserted that raising the quality of the people cannot be facilitated by the traditional ideology of an

exam-oriented education. A 1993 document entitled 'China education reform and development programme' states that 'Secondary and primary schools need to turn from "exam-oriented education" to face the students, to comprehensively raise the quality of students' ideological thinking and morals, enhance their standards of culture, science, labour and technical skills, develop their physical and emotional qualities and advance the students' lively development, to bring out each student's special characteristic' (Anon, 1993).

The following year, the concept of 'quality-oriented education' was formally mentioned in a government document. This document, titled 'Several opinions of the Chinese Communist Party's Central Committee on further strengthening and improving moral education in schools', states:

> There is an urgent need for *quality-oriented education* to increase the adaptation to current development, social progress, and establish the socialist market economic system. There is a need to nurture the students' spirit in forging ahead, self-reliance and pioneering … strive to improve the students' artistic accomplishment and appreciation; for them to be active in adolescent health education, … to help students improve the psychological quality of a healthy personality, enhance their ability to withstand setbacks and adapt to the environment. (Anon, 1994, italics added)

Since the 1990s, the term 'quality-oriented education' has entered mainstream education discourse and reiterated by Chinese leaders and educators. As recent as 2010, the term 'quality-oriented education' was given prominence by top Chinese leaders Hu Jintao and Wen Jiabao. At the National Education Conference in 2010, Hu Jintao stated that 'the main strategy for educational reform and development is to comprehensively implement quality-oriented education… the main point is to focus on all students, to comprehensively foster the development of students, … the innovative spirit of daring to explore, the practical ability to solve problems' (cited in Shanghai Academy of Educational Sciences, 2010). Wen Jiabao also underlined at the same conference the need to 'comprehensively promote quality-oriented education, deepen curriculum and teaching reform, innovate teaching mindset, teaching content, teaching methods, to raise the students' learning ability, practical ability, innovative ability' (cited in Shanghai Academy of Educational Sciences, 2010).

The push for quality-oriented education is triggered by both internal and external factors. Internally, the Chinese authorities are aware of the social problems engendered by an exam-oriented education. The nature of high-stakes exams has led to negative effects in China. A school principal put it this way:

> Schools only teach what is tested; the exam is the baton [zhihuibang]. Teachers rely on transmission in class, students have to complete many practice questions after class. Students rely on rote learning and memorisation, attend all kinds of tuition on weekends, and do much homework. They do not learn about knowledge construction or different ways of learning, which hamper their proactive spirit in learning and creativity. The result is that they become bookworms who have high scores but low abilities [gaofen dineng].

By 1980s, there were clarion calls from the public for educational reform to change an exam-oriented education to one that underscores the students' comprehensive development beyond test scores.

Photo 7.2 Samples of students' homework in Shanghai

Externally, the Chinese/Shanghai authorities are aware of the need to adopt an educational ideology that prepares their graduates for the realities of globalisation. In a major document entitled 'Explanation for the trial curriculum plan for ordinary secondary and primary schools in Shanghai (social version)', the Shanghai Municipal Education Commission (n.d.) notes that the 'era of the knowledge economy' poses new demands to basic education. The document describes a knowledge economy as follows: 'The volume of knowledge has become larger and larger, the period of obsolescence has become shorter and shorter, the level of difficulty of knowledge has become higher and higher, the extent of connectedness [of knowledge] has become stronger and stronger, the source of knowledge has become wider and wider, the rate of knowledge transmission has become faster and faster' (Shanghai Municipal Education Commission, n.d.). To meet the challenges of a knowledge economy, the document spells out the task at hand for schools:

> School education should change from having traditional transmission of human culture as its focus to having an equal emphasis on imparting human culture and nurturing an innovative spirit. Schools should also establish the ideology that 'true strength lies in the ability to acquire knowledge', and focus on building students' character and raising their ability to acquire, add to, exchange and apply knowledge, as well as to carry out research and solve problems (Shanghai Municipal Education Commission, n.d.).

Another document entitled the 'Synopsis of Shanghai's middle and long term education reform and development plan' (2010–2020) states that the aim of such reform is 'for the sake of every child's lifelong learning' (Shanghai Municipal Education Commission, n.d.). As in other documents, this document makes reference to worldwide trends in countries such as Japan, Singapore and the United States, to strive for equal opportunity in the classroom, lifelong education, emphasise application,

integration, flexibility and students' character development (Shanghai Municipal Education Commission, 2010). In light of these developments, the document added that Shanghai should therefore aspire to 'achieve modern education, establish a learning society, to inspire everyone to develop his potential, be world-class in educational development and human capital utilisation' by the year 2020.

Curriculum Reforms Towards Quality-Oriented Education

The current curriculum reform takes place against a backdrop of decades of educational changes in China since 1949. (For details of the curriculum reforms in China, see Zhen, 2005.) It is instructive to give a brief historical overview of the curriculum reforms in China in general and Shanghai in particular (Tan, 2012). The first decade after the establishment of the People's Republic of China in 1949 witnessed the adaptation of the Soviet model of education and the introduction of locally produced teaching materials.

In 1958, the government launched major educational changes to promote socialist and agrarian education. That lasted until the Cultural Revolution that occurred from 1966 to 1976; all universities were closed and most intellectuals were imprisoned or sent to farming camps. The educational system was rebuilt after 1976 and a national college entrance exam was introduced in 1977. Modern education reforms began in 1985 when then Chinese leader Deng Xiao Ping stressed the need to develop human talent through education reforms.

In Shanghai, the current reform is known as the 'Second Phase or Second Stage Curriculum Reform' [erqi kegai] (1998-present). The 'First Phase Curriculum Reform' (1988–1997) marked a series of major educational reforms targeted at equipping schools to meet the needs of rapid economic developments in China. The various curriculum reform initiatives aimed for students to have good qualities in thought and conduct, culture and science, body and emotions, labour and skills and a healthy development of character. A major change was the introduction of 3 types of subjects: compulsory subjects, electives and activity-based subjects. The curriculum also underscored the development of students' basic attitudes, knowledge and ability. The reforms were piloted in 1991 and incrementally rolled out for different levels.

The 'Second Phase Curriculum Reform' started in 1998 with the publication of a number of policy papers to inform educators of the impending reforms. The focus is on furthering the implementation of quality-oriented education to meet the requirements of modern times. The accent is not just on enhancing scientific knowledge but developing a scientific spirit, attitude and method, as well as shaping one's worldview, value system and whole-brain ability. This reform aims for 3 'breakthroughs': reduce excessive schoolwork and increase education quality, strengthen the basics and nurture ability, and raise quality and develop character.

A policy paper entitled the 'Curricular plan for ordinary primary and secondary Schools in Shanghai' published by the Shanghai Municipal Education Commission (n.d.) states that this second wave of reforms is geared towards the holistic development

of the student in the moral, intellectual, physical, aesthetic and social aspects through diverse learning experiences. The curriculum reform capitalises on Shanghai's strengths in internationalism and information and communication technology (ICT) to enable students to acquire 'an innovative spirit and real-life ability' (Shanghai Municipal Education Commission, n.d.).

The desired outcome is to take learning beyond exams to active engagement with the community through social practice, community service and vocational education. The current curriculum reform has brought about changes in the curriculum, pedagogy, assessment and teacher professional development. As the practical implementation of the curriculum reform occurs at the school level, I shall postpone a discussion of the details of reform implementation to Part III of this book.

Shanghai's Quality-Oriented Education: Global and Local

Go Global

A distinctive trait of Shanghai – from its government leaders to the ordinary folks – is its people's international outlook and desire to learn the latest and best from abroad. This trait was manifested in and pointed out by many of the school principals and teachers I interviewed when I asked them about Shanghai's educational success. 'Shanghai will keep a lookout for the latest in the world and prepare for it', said a teacher. 'Shanghai in recent years has borrowed curriculum reform experiences from developed countries, and designed curriculum reform based on our country's situation', added a school principal.

It is evident from official documents that Shanghai keeps an eye on international developments in education (Shanghai Municipal Education Commission, 2010). The task to nurture human talent is particularly essential for Shanghai as it aims to be a modern international economic, financial, trade and shipping centre and lead China in successful educational reforms.

It appears that this desire to learn and adapt ideas and practices from overseas extends to Shanghai's preparedness for PISA. A number of principals and teachers told me that they have incorporated PISA or PISA-type questions into their assignments for students. A school principal said: 'I'm in a primary school and we incorporate PISA type of questions into our mathematics lessons. During seminars organised by our district education bureau, the education leader will share with us PISA questions.' A number of educators in Shanghai have noted that the shift towards student-centred educational ideology draws upon exogenous ideas, particularly from the West. A teacher said to me: 'Now there's a big education reform in China using Western terms. The change is that now there's democratic awareness, a need to bring out the student's character and thinking.'

Stay Local

Despite the adoption of 'Western terms', it is important to note that Shanghai's ideology of developing every child is not motivated by the liberal notions of individualism or human rights that are advocated in Anglophone societies. Rather, it is intended to serve the country's agendas, needs and interests. A 2001 document by the Ministry of Education (2001) states that the basic curriculum reform ideology is 'to revive the Chinese nation'. The Shanghai Municipal Education Commission (n.d.), in the document 'Curriculum plan for ordinary secondary and primary schools in Shanghai', underlines the link between education and the political ideology of socialism: 'Education must serve modern socialism, be aligned with economic productivity, and nurture participants and leaders of socialism who are developed morally, intellectually and physically'.

This message of using education to serve the national agenda is often reiterated by top Chinese leaders. For example, at the national education conference in 2010, Hu Jintao stated that the main strategy of educational reform and development is to comprehensively implement quality-oriented education so as to 'raise their sense of social responsibility to serve the country and people, the innovative spirit of daring to explore, the practical ability to solve problems, to guide students to form the correct worldview, life view, values, consolidate their beliefs and confidence in Party leaders and the socialist system' (cited in Shanghai Academy of Educational Sciences, 2010). Lo (2007) observes as follows:

> Socialism is still being embraced as the dominant ideology that legitimises the party and the state, though the ideal of revolutionary globalism in international politics is de-radicalised. Nationalism is then expressed in terms of the neo-liberal mentality of economic developmentalism that helps to bring the nation to moderate affluence. Capitalist globalism, in turn, calls for the national policy that places priority on 'peaceful evolution and co-development' from a global perspective. (p. 48)

In short, a technocratic view of education is explicitly held by the Chinese government, which promotes the use of global techniques and logics to serve its socialist goals. To borrow Ong's words, the curriculum reforms are 'opportunistically combined with the socialist state's aspirations' so as to produce 'self-reliant but state-dominated professionals' (Ong, 2007, p. 6). Woronov (2009, p. 585), quoting Inda (2005, p. 7), also argues that quality-oriented education can best be understood as 'an assemblage of authorities, knowledge, and techniques that endeavour to shape the conduct of individuals and populations in order to effect individual and collective welfare' (see also Kipnis, 2007).

Conclusion

This chapter discussed how the Shanghai authorities have championed a quality-oriented education to prepare the students for global challenges for the good of the country. The primacy of quality-oriented education marks a departure from the past

focus on exam-oriented education. 'Teachers today are slowly shifting the focus from textbook, subject knowledge and curriculum standards set by authority, to students' quality, students' assignments, essays', a senior secondary teacher pointed out to me. This change, he added, entails not just in the teaching methods used but more critically in the ideology espoused by teachers. He explained:

> Traditional thinking is about knowledge transmission. It's great but it's not about the individual, it's about ideology, politics, inculcation. It's given by others, it's not through your own thinking and not about nurturing innovative awareness. Now it's about being student-centred, focusing on student development.

And it is this student-centric ideology that motivated the principal, mentioned at the start of the chapter, to want to get his students out of the classroom and into the boardroom across the street.

References

Anon. (1985). *Zhonggong zhongyang guanyu jiaoyu tizhi gaige de jueding* [Decision of the CPC Central Committee on reform of educational system]. http://news.xinhuanet.com/ziliao/2005-02/06/content_2554936.htm. Accessed 8 Mar 2012.

Anon. (1993). *Zhongguo jiaoyu gaige he fazhan gangyao* [China education reform and development programme]. http://gaige.rednet.cn/c/2008/06/19/1533296.htm. Accessed 8 Mar 2012.

Anon. (1994). *Zhonggong zhongyang guanyu jinyibu jiaqiang he gaijin xuexiao deyu gongzuo de ruogan yijian* [Several opinions of the CPC Central Committee on further strengthening and improving moral education in schools]. http://gaige.rednet.cn/c/2008/06/30/1539947.htm. Accessed 8 Mar 2012.

Inda, J. X. (2005). *Anthropologies of modernity: Foucault, governmentality, and life politics*. Malden: Blackwell.

Kipnis, A. (2007). Neoliberalism reified: *Suzhi* discourse and tropes of neoliberalism in the People's Republic of China. *Journal of the Royal Anthropological Institute (N.S.), 13*(2), 383–400.

Lo, T.-Y. J. (2007). Nationalism and globalism in the junior secondary history curricula of Hong Kong and Shanghai. *Compare: A Journal of Comparative and International Education, 37*(1), 37–51.

Ministry of Education. (2001). *Jiaoyubu gaunyu yingfa 'jichu jiaoyu kecheng gaige gangyao (shixing)' de tongzhi* [Notice by the Ministry of Education regarding 'the synopsis of basic education's curriculum reform (trial)']. http://www.gov.cn/gongbao/content/2002/content_61386.htm. Accessed 2 Jan 2012.

Ong, A. (2007). Neoliberalism as a mobile technology. *Transactions of the Institute of British Geographers, 32*(1), 3–8.

Shanghai Academy of Educational Sciences. (2010). *Quanguo jiaoyu gongzuo Huiyi quxing Hu Jingtao and Wen Jiabao fabiao zhongyao jianghua Guan Qinglin, Li Changchun, Xi Jingping, Li Keqiang, Zhou Yongkang chuxi* [Organisation of the national education conference, Hu Jingtao and Wen Jiabao made important speeches, Guan Qinglin, Li Changchun, Xi Jingping, Li Keqiang, Zhou Yongkang attended]. http://www.cnsaes.org/homepage/html/resource/res02/841.html. Accessed 2 Mar 2012.

Shanghai Municipal Education Commission. (2010). *Shanghaishi zhongchangqi jiaoyu gaige he fazhan guihua gangyao (2010–2020)* [Synopsis of Shanghai's middle and long term education reform and development plan (2010–2020)]. http://www.shmec.gov.cn/html/xxgk/201009/301122010002.php. Accessed 2 Mar 2012.

Shanghai Municipal Education Commission (n.d.). *Shanghaishi putong zhongxiaoxue kecheng fangan* [Curriculum plan for ordinary secondary and primary schools in Shanghai]. http://www.fc2z.fx.edu.sh.cn/xxgk/3/4/2/342007.doc. Accessed 2 Mar 2012.

Shanghai Municipal Education Commission (n.d.). *Shanghaishi putong zhongxiaoxue kecheng fangan (shixing gao) shuoming (shehui ban)* [Explanation for the trial curriculum plan for ordinary secondary and primary schools in Shanghai (social version)]. http://www.shmec.gov.cn/attach/article/72.doc. Accessed 2 Mar 2012.

Tan, C. (2012). The culture of education policy making: Curriculum reform in Shanghai. *Critical Studies in Education, 53*(2), 153–167.

Woronov, T. E. (2009). Governing China's children: Governmentality and 'Education for Quality'. *Positions: East Asia Cultures Critique, 17*(3), 566–589.

Zhen, D. (2005). Xin zhongguo kecheng gaige de lishi huigu [Historical review of new Chinese curriculum reform]. *Education and Vocation*. http://tech.hzedu.net/Template/message3.aspx?id=33331. Accessed 3 Mar 2012.

Chapter 8
Balancing Decentralisation with Centralisation

Having visited a number of Shanghai schools, I've been duly impressed by a diverse range of interesting activities schools there have rolled out to showcase their students' talents. An example is the lifelike sculptures of human heads completed by some junior secondary students in a school (see below).

Photo 8.1 The artistic talent of Shanghai students can be seen in these sculptures completed by them

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_8, © Springer Science+Business Media Dordrecht 2013

In my conversations with Shanghai school principals and teachers, I notice that many of them were keen to share with me how they have designed and launched various innovative school-based curricula. The emphasis now, they pointed out to me, is for each institution to have its school's special characteristics [xuexiao tese]. Despite an array of school-based activities and programmes, I also observe that the school leaders invariably quoted the same slogans (e.g. 'student-centred', 'quality-oriented education'), referred to the same policy papers (e.g. 'Synopsis of Shanghai's middle and long term education reform and development plan for 2010–2020', 'Curriculum plan for ordinary secondary and primary schools in Shanghai'), adopted similar practices (e.g. small group discussions, debates, dialogues) and highlighted common assistance they get from the authorities (e.g. attended teachers' training workshops organised by the district education bureau, underwent school inspection from the authority).

There is, in short, a palpable policy alignment even as the school leaders are given the autonomy to manage the schools. What we see in Shanghai, in other words, is decentralisation coupled with centralisation, or 'decentralised centralism' – the topic for this chapter.

The Motivations for Decentralisation

The term 'decentralised centralism' was introduced by Gustav E. Karlsen to refer to the paradoxical and dynamic interactions between decentralisation and centralisation (Karlsen, 2000; Tan & Ng, 2007). He identifies four motivations for decentralisation using Norway as an example.

The first motivation is the belief that decentralisation will strengthen democracy by transferring power from central to local bodies. The aim is to bring the decision-making process closer to the people. Secondly, it is believed that decentralisation promotes innovation and school-based development. The assumption is that a decision will be more readily accepted and abided by if the people involved are directly responsible for making that decision. Thirdly, decentralisation helps the local school design programmes and activities that are better adapted to the needs of the local community. By establishing a more flexible and locally oriented school, it is hoped that this will have a positive effect on students' motivation and learning and give them a feeling of belonging and purpose to the local community. Finally, policy-makers believe that decentralisation is salutary for achieving rationalisation and efficiency. This is made possible through a more market-oriented approach where commercialisation and privatisation in the field of education are practised.

Decentralisation in Shanghai

All the above motivations are evident in the case of Shanghai. As noted in the introductory chapter, the management of education in Shanghai is based on the 'two-tier government, two-tier management' system. This system gives local governments at

Table 8.1 The curriculum for Shanghai schools

Domain of learning	Course category		
Language and literature • Includes Chinese and foreign language (English)	Foundational Course	Expanded course: compulsory and elective	Inquiry/Research course: type I and type II
Mathematics			
Natural sciences • Includes primary-level nature, secondary-level science, physics, chemistry and life sciences			
Social Sciences • Includes primary-level conduct and society, geography, history, political thought, secondary-level society, etc.			
Arts • Includes music (song and dance) and art			
Technology • Includes information technology and labour and technical Skills			
Sports and fitness			
Integrated practice • Includes social practice and community service			

Source: Shanghai Municipal Education Commission (n.d.)

the district level the autonomy to design and implement education policies, provide continuing education for teachers as well as approve and bear the expenditure on basic education.

As mentioned in the previous chapter, the curriculum reform aims to promote innovation through school-based curriculum. This is achieved by encouraging schools to help students gain practical skills by engaging with the community, and enabling greater school effectiveness and efficiency through developing the school's special characteristics. By moving away from centralisation, more leeway is now given to the schools to adapt the curriculum to suit the local context and meet their students' needs.

Under the current education reform, the new curriculum covers eight domains of learning: language and literature, mathematics, natural sciences, social sciences, arts, technology, sports and fitness, and integrated practice. The last domain comprises community service and other activities that allow the students to engage with the community. The curriculum is divided into 3 broad course categories: foundational course [jichuxing kecheng], expanded course [tuozhanxing kecheng] and inquiry/research course [tanjiuxing, yanjiuxing kecheng] (see Table 8.1).

Foundational courses are standardised subjects and compulsory for all students. They represent the basic requirements from the Shanghai municipal government to

nurture ‘quality citizens’ for the country. The expanded courses, on the other hand, are intended to cater to the students’ different interests and learning abilities as well as society’s needs. There are two types of expanded courses: compulsory expanded courses focus on real-life application in society, while elective expanded courses centre on the various domains of learning such as language, sports and fitness and arts. An example of a compulsory expanded course is a visit to a science museum to learn about the relevance of science in everyday life; an example of an elective expanded course is learning modern dance.

Inquiry/research courses serve to help students learn how to acquire knowledge, inspire them to learn and conduct research independently, and apply what they have learnt in real life. It is known as inquiry course to students from the primary to junior secondary levels, and research course at the senior secondary level. Inquiry/research courses comprise two types: Type I focuses on a specific topic or question based on the student’s interest and is carried out by the student independently under the guidance of the teacher. Unlike type I where the focus tends to be multidisciplinary, type II is more directly linked to the foundational subjects where the student conducts research on specific disciplinary knowledge. An example of Type 1 topic is ‘The problem of food quality standard in China’, and an example of Type 2 topic is ‘A research on Nobel Prize mathematicians’. By providing three categories of courses, it is hoped that students from the primary to senior secondary levels will have more course options to choose from, depending on their interests and aptitude, while remaining grounded in a firm foundation of content knowledge.

A key feature of the current reforms is its emphasis on school autonomy. By moving away from centralisation, it is hoped that more room will be given to the schools to adapt the curriculum to meet the specific needs of the students, teachers and community. School leaders are free to design about one-third of their curricula for the implementation of expanded subjects and inquiry/research courses. This brings the decision-making process close to the people at the school level.

Decentralisaton is also evident in the assessment modes. Rather than just assessing students’ learning at the end through summative assessment, teachers should track their students’ learning process and developmental progress through the ‘Growth Record Booklet’ for each student and other alternative assessment tools (Shanghai Municipal Education Commission, 2006). In line with the desired outcome to nurture students holistically, schools are also encouraged to identify and develop their niches in various areas such as ICT, English, arts and sports. Consequently, there are now schools that specialise in performing arts, chess, technology and citizenship education. I shall give examples of expanded and inquiry/research courses and other innovative initiatives implemented by some Shanghai schools in Part III.

The Dynamics of Decentralised Centralism

Karlsen (2000) further distinguishes 4 processes in decentralised centralism: the dynamics of initiation, the dynamics of content, the dynamics of levels and the dynamics of simultaneity.

The first process, the *dynamics of initiation*, refers to the practice where decentralisation reforms are initiated from the top by the authorities at the central level, but implementation and accountability are local duties. These reforms have often led to new central legislation and regulations, and can in reality be a strategy for strengthening central power. Passivity and even resistance have been observed at the local level in response to these reforms.

The second process is the *dynamics of content*, which refers to a two-way process between centralisation and decentralisation. The decentralisation of content and the delegation of power to district authorities, allowing them to set the curriculum at the local level, are the reasons for the differentiated developments across schools. This process, paradoxically, legitimates standardisation and some degree of central control. Consequently, a balance between standardisation and diversity of school content and curriculum is achieved.

The third process is the *dynamics of levels*. While there has been decentralisation of tasks as evident in a delegation of administrative responsibility to the local levels, this does not necessarily mean a shift of power from a higher to a lower level. In fact, the decentralisation of authority from a central level to lower levels can have a legitimising function for the central level to set national standards and develop national assessments.

Finally, the *dynamics of simultaneity* rejects the model of decentralisation and centralisation as waves following and replacing each other. Rather, there is the simultaneous practice of centralisation where the central level sets central goals and standards for outcomes as well as decentralisation where the means and the responsibility for implementation are local duties.

Decentralisation is countered by a good deal of regulatory re-centralisation. Karlsen also argues that the rhetoric of decentralisation indicates a strong ideological drive towards not one ideological root but many. For example, there may be elements of both collectivism and individualism where ideological elements in decentralisation such as populism and liberalism react against the power of the established elite and advocate more individual freedom. We can identify the four dynamics in the case of Shanghai (for a discussion of the phenomenon of decentralised centralism in another East Asian society, Singapore, see Tan & Ng, 2007; Tan, 2008b).

The Dynamics of Initiation

First, there is evidence that while the decentralisation reforms are initiated from the top by the authorities at the central level, implementation and accountability are local duties. All aspects of the curriculum reform are conceptualised and promoted from the top in a hierarchical manner, starting from the central government in China to the municipal government of Shanghai, then to the various district governments and finally to the schools. As a city that has been given the status of a province and as a pioneer in educational reform, Shanghai has been given more autonomy in

conceptualising and implementing its education policy compared to other parts of China.

Still, the education policies in Shanghai are designed to support the educational ideology of the central government. When introducing new policy initiatives, the Shanghai municipal government will issue or reissue various policy papers to be read, accepted and disseminated by the school leaders. This process explains why the principals and teachers I spoke to evince a great familiarity with the policy initiatives introduced by the municipal government and/or district governments. The task of the schools is to implement these policies faithfully, albeit with some degree of innovation and autonomy.

As a principal notes: 'For many years, our country's curriculum at the macro and micro levels has been strictly designed and regulated by the country's government. Our country has regarded teachers as implementers of the national curriculum.' The current curriculum has changed this situation somewhat by giving schools more leeway in designing their school-based curriculum. But it is important to note that the school-based curriculum, concentrated on the expanded and inquiry/research courses, does not apply to the examined foundational courses that are still under the control of the municipal government. The next section will elaborate on this last point.

The Dynamics of Content, Levels and Simultaneity

The dynamics of content means that there is a balance between standardisation and diversity of school content and curriculum. This dynamic process is seen in two ways in Shanghai. First, while schools are given the autonomy to design and implement their school-based curriculum, they still have to ensure that their students are well versed in the common curriculum taught in the foundational courses. These foundational courses are important and take up most of the time of the schools, as students ultimately have to sit for their terminal exams based on these courses (details of the exams will be given in the next section).

In addition, even for the expanded and inquiry/research courses, schools do not work independently of the authorities. Rather, they take orders, receive training and carry out specific school-based initiatives from the district authorities. To illustrate the 4 dynamics in decentralised centralism, it is helpful to look at an example of a district's curriculum implementation process in Shanghai.

The following example of a district's curriculum implementation process is taken from an article written by Xia Xuemei. According to Xia (2011), the district authorities take the lead in identifying a common research focus for implementation in the curriculum for all schools in the district. The research focus of districts changes every 5 years, in tandem with the 5-year plan of the central government. For the ninth 5-year plan, the topic was 'Research on developed countries' implementation of quality education'; for the 'tenth 5-year plan', it was 'Research on the implementation of curriculum reform by local education research training centres';

and for the ‘eleventh 5-year plan’, it was ‘Empirical research on raising student’s schoolwork effectiveness, and reducing the burden and raising the quality’. An education officer from each district’s education bureau is appointed as the person-in-charge of the research.

According to Xia, each district initiates 3 designs for research/courses that reflect 3 types of power structure. The first design is ‘top-down design’ where each district carries out research and designs new courses at the district level. Education officers from the district collaborate with experts from different segments of society such as the universities, special-grade teachers from the schools and other research organisations. Examples of courses that have been designed in such a manner and implemented in the district are the ‘English village’ and ‘Learning by Doing’. These course topics are proposed by each district’s education bureau and supported by middle-level organisations, universities, the district’s education experts and special-grade teachers who lend their professional expertise to help design these courses.

The second design is ‘bottom-up, semi-open design’ where the district formulates the goal and the characteristics of the course but leaves the implementation details to the schools. An example is the ‘N-item experiential activity needed by primary school pupils at the district’ where different schools implement various experience-based expanded and inquiry/research courses for their students.

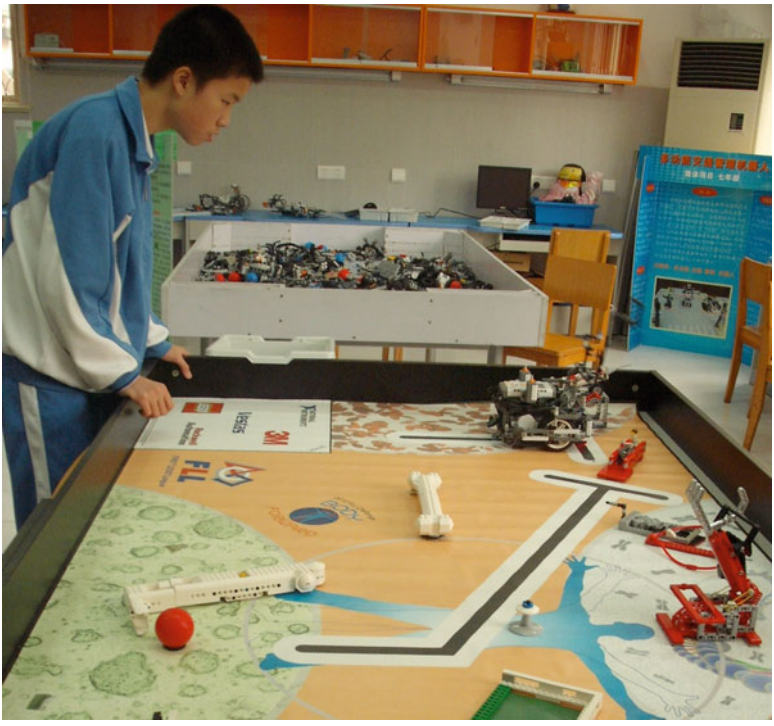


Photo 8.2 A student from a district taking part in an experiential activity

According to a school principal, the district's education bureau gives guidance, offers training, provides resources and even sponsors the costs of activities organised by schools, in the areas of the humanities, sciences, fitness, societal application and so on. Examples of these activities include the 'Know our mother river', 'Little chess board to manifest intelligence' and 'Pick fruits at the village'. These activities, according to the principal, 'help to reduce exam stress, promote quality education, focus on character, give autonomy to students, and enhance their comprehensive development.'

The third design is a 'bottom-up design' where the schools take the lead in initiating a new line of research or course. An example is 'Design lesson based on zone of proximal development' that was pioneered by certain primary and secondary schools. They subsequently came to the attention of the district authorities, which then gave the schools support, feedback and assistance in promoting these courses to other schools.

It is useful to point out that even for such research, schools are not given total autonomy, but have to subject their research/course to the approval and refinement of the district officers. The district government is also responsible for arranging school collaborations within the district. For example, it brings together three schools' subject teaching-research groups and places them under the leadership of an officer from the district's teaching-research group (I shall explain and elaborate on the term 'teaching-research group' in Chap. 17). This arrangement allows not just the sharing of curriculum and teaching resources but also the spreading of the core ideology underlying the district's curriculum and teaching methods.

Xia also discusses the measures adopted by the district authorities to ensure centralised control. She maintains as follows:

> The district also uses many administration strategies: first, a clear and mandatory order to include all the primary and secondary schools in the district. The order is very clear on what to do, at what time, in what format, under very clear regulation. Secondly, reward inducement is practised by providing cash rewards and support for participating schools. Thirdly, the district will provide resources and fees to bring together the district youth activity centre's courses and schools' expanded courses. (Xia, 2011 p. 7)

Another strategy used by the district is school appraisal. The district expects schools to incorporate the district's research focus and course into their school development plans and sends its experts to assess the extent to which the school has carried out the district-stipulated research/course. The appraisal is conducted through various methods such as school inspection, checking of documents and discussion sessions. Feedback will be given to the school during the midterm (after 2 years), followed by a formal appraisal at the end of the 4-year term.

Another example of a district's curriculum implementation process in Shanghai is documented in 'Project Team for the Advancement of Pudong New Area School-Based Educational Research Training' (2007). The report explains how decentralisation reforms are initiated from the top by the authorities at the central level, but implementation and accountability are local duties. The district took the lead to hold a forum to explain the requirements of the 'eleventh 5-year' school-based research training to the schools in the district. The district department then

proceeded to train the school principals since they were the ones tasked to spearhead the school-based research under the decentralisation process. Based on the district's school-based training guidelines, each school is expected to analyse the school's specific situation before proposing its school-based programmes. The analysis includes the status of the school teaching staff, the standard of teaching and learning and current challenges. That the school is encouraged to design its own proposed training plan while adhering to the district's training guidelines demonstrates the dynamics of content, where there is a balance between standardisation and diversity.

Next, the school will submit its proposed school-based training objectives, training tasks, safeguard measures and school-based training implementation plan. The proposal will be reviewed by the district officials, together with educational experts. Schools that pass the reviews will be allowed to launch the training with the training costs and continual assistance provided for by the district. Annual inspections will be conducted by the district authority and only schools that pass the inspection led by educational experts will be reimbursed with the cost of school-based training the following year. The reviews and inspections, as well as the conditional offer of training funds for schools that pass the inspection, point to the dynamics of initiation where new central legislation and regulations have been introduced to strengthen the district's power.

Overall, we can identify the 4 dynamics that characterise the phenomenon of decentralised centralism. As pointed out earlier, the *dynamics of initiation* is evident in the strong leadership taken by the municipal and district educational authorities in the school-based curricula. In the same vein, the *dynamics of content* is demonstrated in the schools being encouraged to design their own curriculum within a system of standardisation and central control. That the schools remain accountable to the district government through mechanisms such as submitting their proposals for approval and seeking funding, training and support exemplifies the *dynamics of levels*. In other words, while there has been decentralisation of tasks and a delegation of administrative responsibility to the schools, there is no real shift of power from a higher to a lower level. Finally, the *dynamics of simultaneity* is manifested in the concurrent practice of centralisation where the district government sets the overarching goals and standards for outcomes through the school appraisal, and decentralisation where the means and the responsibility for implementation are the duties of the local schools.

Conclusion

This chapter discussed how the Shanghai authorities combine decentralisation with centralisation to encourage school autonomy while maintaining central control. On the one hand, the curriculum reform hopes to move away from an exam-oriented, didactic and passive style of learning towards a quality-oriented and active form of learning, characterised by higher-order thinking, decentralisation, greater school

autonomy and more choices for students. Such a move resembles the effects of neo-liberal education policies and practices that are more commonly found in Anglophone societies. On the other hand, the acceptance of what appears to be neo-liberal, global education policies does not imply that the Shanghai government has embraced neo-liberal values and logic. The reverse is true: the actions of the Shanghai municipal government reflect the Chinese government's agenda of using selected and modified 'best practices' from overseas to improve its school system and strengthen its socialist ideology.

We have seen how the Shanghai government has adopted the practice of decentralised centralism to ensure policy alignment and quality control. The next chapter shall further elaborate on how the 4 dynamics in decentralised centralisation work in the Shanghai context through a monitoring and assessing mechanism.

References

Karlsen, G. E. (2000). Decentralised centralism: Framework for a better understanding of governance in the field of education. *Journal of Education Policy, 15*(5), 225–528.

Project Team for the Advancement of Pudong New Area School-Based Educational Research Training. (2007). *'Xiaoben yanxiu' xuexi ziliao xuanbian* [Selected learning materials for school-based educational research training]. http://www.docin.com/p-66243008.html. Accessed 7 Jan 2012.

Shanghai Municipal Education Commission. (2006). *Shanghaishi zhongxiao xuesheng zonghe sushi pingjia fangan (shixing) de tongzhi* [Notice on Shanghai's secondary and primary school student's comprehensive appraisal plan]. http://www.ptq.sh.gov.cn/gb/shpt/node4343/node4349/node4649/node4668/node4672/userobject1ai56455.html. Accessed 12 Feb 2012.

Shanghai Municipal Education Commission (n.d.). *Shanghaishi putong zhongxiaoxue kecheng fangan* [Curriculum plan for ordinary secondary and primary schools in Shanghai]. http://www.fc2z.fx.edu.sh.cn/xxgk/3/4/2/342007.doc. Accessed 2 Mar 2012.

Tan, C. (2008b). Globalisation, the Singapore state and educational reforms: Towards performativity. *Education, Knowledge and Economy, 2*(2), 111–120.

Tan, C., & Ng, P. T. (2007). Dynamics of change: Centralised centralism of education in Singapore. *Journal of Educational Change, 8*(2), 155–168.

Xia, X. (2011). *Tansuo quxian kecheng shishi de bentu moshi* [Exploring the local model for district curriculum implementation: Case research of Shanghai Jingan district]. Shanghai Academy of Educational Sciences, http://www.cnsaes.org/homepage/html/publication/publicationreport/5350.html. Accessed 24 Feb 2012.

Chapter 9
Autonomy and Accountability: The School Appraisal System

Although I'm an ethnic Chinese, I wasn't brought up in a very Chinese environment. Singapore, after all, is a plural society where Chinese like myself are constantly exposed to a potpourri of cultures and languages locally and from overseas. 'Singaporean Chinese may look Chinese but they're more Westernised', my mainland Chinese friends told me.

Given my background, I didn't know much of Chinese art such as calligraphy until I visited a school in Shanghai. The principal, while highlighting the school's achievements, proudly showed me an award-winning calligraphy done by a student of the school (see photo on the left). 'The student is only in junior secondary level but she showed such sophistication in her strokes', her art teacher said admiringly.

I received a crash course on Chinese calligraphy. I learnt that it is an ancient art that can be traced to the origin of the Chinese characters thousands of years ago. An art form that requires much discipline and practice, a good piece of calligraphy is one that showcases the calligrapher's deep emotions, personality and sense of beauty – subjective qualities that are hard to pin down but obvious to calligraphy experts.

Despite including a subjective element in evaluating a piece of calligraphy, it is not a case of 'anything goes' in judging good calligraphy. There are rules that separate good calligraphy from bad ones, such as the materials used, the way the characters are written and whether the way the characters are written matches the meaning conveyed by the calligrapher. Learning about Chinese calligraphy and the school appraisal system in Shanghai makes me realise that there is actually a symbolic connection between them. Like Chinese calligraphy, school appraisal involves the schools showcasing their subjective characteristics within the rules set by the Shanghai authorities. This chapter discusses how the school appraisal system in Shanghai manifests the 4 dynamics of decentralised centralism mentioned in the previous chapter.

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_9,

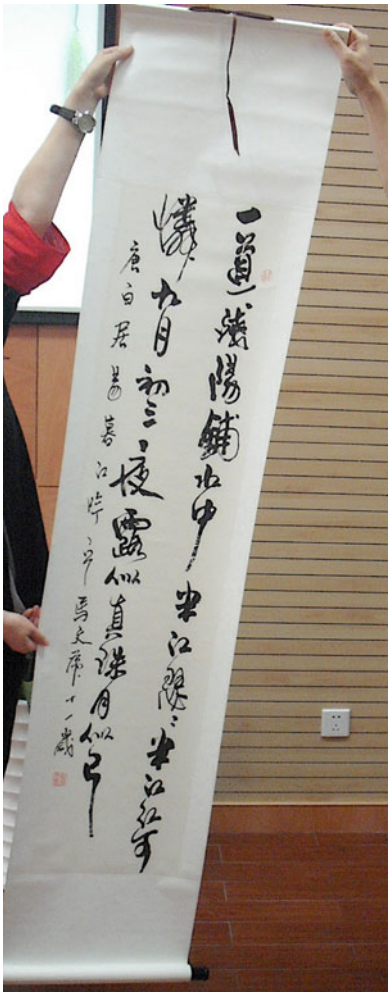


Photo 9.1 An award-winning Chinese calligraphy produced by a student

School Developmental and Supervisory Appraisal

The Background

An indication of both decentralisation and centralisation at work is the 'School Developmental and Supervisory Appraisal' [xuexiao fazhanxing dudao pingjia]. First launched in 1999 in some schools, it was aimed at promoting quality-oriented education.

In a 2002 document, the Ministry of Education explained that the appraisal was introduced to rectify the school appraisal and exam system that overemphasised screening and selection at the expense of improvement and encouragement. Such a system focused on learning results through the use of a uniform approach and

neglected the students' comprehensive development and individual differences (Ministry of Education, 2002). The school developmental and supervisory appraisal, therefore, is intended to foster more holistic school development. The Shanghai Municipal Education Commission explains how the appraisal is linked to school autonomy and quality education:

> Implementing 'school developmental and supervisory appraisal' requires education administrations to further change their school management functions, allowing the school's principal to *autonomously manage the school*, so as to establish a complete, modern school system. It requires schools to continuously improve its educational management, strengthen the establishment of its staff, raise educational quality and school management benefits, leading to self-restraint, self-perfection, self-development, and other internal mechanisms to continuously aid in the development and *comprehensive implementation of quality-oriented education.* (Shanghai Municipal Education Commission, 2003, p. 2, italics added)

Highlighting the 'special characteristics of modernity, of Shanghai, and of the district', the new school appraisal focuses on the students' comprehensive development, the teachers' professional growth and school improvement (Shanghai Municipal Education Commission, 2005, p. 3).

The Process

Under the appraisal system, every school is required to formulate a 3-year development plan that comes with a yearly implementation plan. Each school needs to rally its entire staff to draft the plan based on the demands of the current curriculum reform that underscores a quality-oriented education. Each school needs to analyse its situation and identify its developmental vision, targets, strategies and measures.

The Shanghai Municipal People's Government Educational Supervisory Office will then conduct an on-site inspection, and the supervisory experts will cast votes on whether the plan passes inspection. Any school plan that does not pass the inspection will need to be modified. After the inspection, the schools will carry out their plan, with regular self-appraisal. The self-appraisal process is known as 'school autonomous development supervision', which forms a part of the school's appraisal. This process entails the schools forming their own 'autonomous supervision committee' and organising a 'teachers' congress' [jiaodaihui] to discuss the school's plan and implementation methods.

The school administration then needs to announce the plan to all its teaching staff, parents and students at the start of the school term; accept the teachers' congress' monitoring and appraisal during the term; give a debrief to the teachers' congress at the end of the term; and improve upon its plan based on feedback from the teacher's congress. The school also needs to give a report to the supervisory office every term and share the self-appraisal reports with the public.

The school will determine the academic year's work plan based on the 3-year plan and break down the targets of the plan into yearly targets to be carried out by the respective departments and people in charge. The supervisory office will visit the school regularly during the implementation phase of the plan to check on the

school's situation and allow the school to modify and improve the plan. The last stage of the plan involves carrying out a concluding appraisal for the school. At the end of these 3 years, the supervisory office, together with a team of education officers and experts, will carry out a comprehensive appraisal and guide the school in formulating a new developmental plan. The district's education supervisory department will write a report announcing the appraisal outcome, affirming the school's results and pointing out remaining problems that require improvement.

One principal shared with me his school's recent experience in the school appraisal. The team comprised 5 professional inspectors and 10 part-time inspectors led by the district government's department of education supervisory department. The appraisal was based on 5 main areas: the school's goals and management, curriculum and teaching, moral education and culture, teaching force, and logistics and school management. The activities carried out by the team during the 3-day on-site evaluation included the following: listening to the principal's self-appraisal report; reading the school's various work materials and files; observing 41 lessons; interviewing 32 school management staff and some teaching staff; organising student forums and parent forums to get feedback from them; administering a questionnaire to 143 teachers, 62 students and 62 parents; observing the flag-raising ceremony; as well as checking the school's façade, environment and facilities. Based on all these information, the team then submitted a report by identifying the good points of the school as well as areas for improvement.[1]

The Targets, Development Domain and Key Elements of Appraisal

There are three basic targets for school appraisal: school conditions, school management, and school quality (see Table 9.1).

Each specific target comes with specific evaluation points and standards. For example, under 'teaching management', a school will be assessed on its 'teaching-research system for lesson preparation, lesson delivery, lesson appraisal, system for student schoolwork inspection, system for teaching quality assurance etc.'. Under 'staff management', the criterion is whether the school has clear goals for teachers' professional development, concrete measures to nurture young teachers and experienced teachers. Under 'school quality', there are stipulated rates for schools to attain, such as the following:

[1] For another example and details of school appraisal, see Anon (2007) where a school in Shanghai reported its school appraisal experience. It underwent a 3-day on-site evaluation in 2006 when an appraisal team visited the school. The team listened to the principal's self-appraisal report and reviewed the documents provided by the school. It administered a questionnaire survey to 105 teachers, 109 students and 101 parents and interviewed the school leaders and teachers 33 times. It also observed 23 classroom lessons, checked the school's facilities and observed various school activities such as the school's English festival and extracurricular activities. For a case study of 2 schools in Shanghai in their school developmental supervisory appraisal, see Lee, Ding and Song (2008).

Table 9.1 Target synopsis of 'school developmental and supervisory appraisal' for Shanghai secondary and primary schools: Basic targets for school management

Basic target	Specific target
School conditions	School area
	Facilities
School management	School affairs management
	Teaching management
	Moral education management
	Staff management
	General affairs management
School quality	School admission rate and consolidation rate
	Basic requirements [comprehensive aspects of students' development]
	Social evaluation

Source: Shanghai Municipal Education Commission (2005)

- School admission rate of 100% for basic educational levels, 0% school dropout rate, repeat rate: <1% for primary, <2% for secondary
- Graduation rate: >99% for primary, >90% for secondary
- Physical fitness pass rate: >95%
- Student participation in artistic and technological social group activities: >25%
- Parent and community satisfaction: >80%

Photo 9.2 Students getting ready for their mandatory daily physical exercise in a school

Besides basic targets, the school's developmental and supervisory appraisal sets out specific development domains and corresponding elements of appraisal (see Table 9.2).

Table 9.2 Target synopsis of 'school developmental supervisory appraisal' for Shanghai secondary and primary schools: Guide for school development

Development domain	Key elements of appraisal
School development target	School target Nurturing target Management target
School curriculum construction	Curriculum launch Curriculum content Curriculum management Curriculum appraisal
Teaching reform and student learning	Classroom teaching Teaching method Learning motivation Learning ability Appraisal system
School's moral education	Work target Work approach Establishment of mechanism Construction of contingent
School's cultural construction	Cultural environment Cultural activity
Educational subject research	Research direction Management of lesson topic Application of findings
Teaching force construction	School-based training School-based nurturing School-based management
Student development	Nurturing strategy Student quality Student growth
Joint construction by school and community	Mutual participation Mutual sharing of resources

Source: Shanghai Municipal Education Commission (2005)

The appraisal system also outlines the characteristics of and conditions for 'special school characteristics' or niches (Shanghai Municipal Education Commission, 2005, pp. 7–8). Special school characteristics are characteristics that are stable, unique and exemplary. This means any school that hopes to develop its niche needs to fulfil the following 6 conditions:

- The school is supported by advanced school management and education ideology.
- The school's development targets are shared by teachers and students.
- The school's teaching force possesses specialised talents, is strong in moral education and is able to develop the school's special characteristics.
- The school possesses related educational teaching facilities, a conducive learning environment and school culture.

- The school enjoys widespread partnership and support from students who have individual talents.
- The school has substantial information on the special characteristics that reflect the school's development.
- The school may focus on any domain such as moral, physical, artistic, scientific and academic. The domain should succeed in being recognised as a special characteristic item at the district level and above, with at least 80% student participation and at 80% societal recognition.

We can see from the appraisal system that it is used as a tool to ensure quality control and policy alignment. As mentioned earlier, the overarching aim is to promote quality-oriented education by granting schools the autonomy to create and sustain their school's special characteristics or niches. It represents the simultaneous existence of decentralisation and centralisation. On the one hand, the appraisal criteria contain specifications for each school's autonomous individualised development in its curriculum design, teaching force design, educational research, etc. On the other hand, the criteria also contain the authorities' expectations of and specifications for schools' management methods, such as student enrolment rate, teacher office-holding qualifications and schools' financial system management.

The elaboration on the various key elements of appraisal in the 2005 document further demonstrates the authority's clear stand on school compliance. Under the appraisal criterion of 'curriculum launch', the document states that a school will be appraised on how it 'carries out curriculum plan of the municipal's second phase curriculum reform' (Shanghai Municipal Education Commission, 2005, p. 6). In line with the goal of quality-oriented education, the criterion of 'curriculum content' looks at whether the school's curriculum content supports the curriculum reform that nurtures the students' innovative spirit, practical ability and character development. 'Curriculum management' looks at whether the school 'contains teaching management systems and student learning guiding systems that are aligned with second phase curriculum reform requirements' (Shanghai Municipal Education Commission, 2005, p. 6).

Another reference to the curriculum reform goal of student-centred teaching and learning is evident in the requirement for teachers to form 'democratic, equal and harmonious, interactive teacher-student relationships and teaching environments, and guide students to explore autonomously, think independently, collaborate, engage in practical activities and utilise modern technology' (Shanghai Municipal Education Commission, 2005, p. 7).

Discussion on the School Developmental and Supervisory Appraisal

By encouraging schools to develop their own plans, niches and courses, the appraisal system has succeeded to an extent in promoting autonomy, innovation, diversity and efficiency – features Karlsen mentioned as the motivations for educational decentralisation. A survey by the Shanghai Municipal Education Commission shows

that 82.1% of the schools think that the school appraisal system has advanced the development of the school's special characteristics (Shanghai Municipal Education Commission, 2007a). A principal noted:

> The appraisal system gives the schools the space to formulate and carry out their plans based on their school management ideology. So many schools have adopted progressive ideologies, and make use of the opportunity to tread the autonomous development path. For example every school in Shanghai has started its expanded and research courses, some schools have produced good results in sports, arts, and this has changed the problem of uniformity of schools [qianxiao yimian].

However, we should not conclude that the introduction of the school appraisal system means that schools have shifted from an exam-oriented mindset to a quality-oriented mindset and that exam results are no longer important. On the contrary, exam results or, more specifically, college entrance rate [shengxuelü], which is the percentage of graduates who are admitted into universities, especially prestigious ones, continues to be highly valued. A school principal notes:

> The focus on schoolwork results for the school appraisal remains, and society also fervently seeks after high college entrance rates, so it's inevitable for school leaders to manage a school using good student scores as the central goal. Although the education administration has launched a series of appraisal criteria for schools, only when your exam results are good, would other personalised aspects of school management be then deemed effective.

Rather than forsaking an exam-oriented thinking and practice, schools are now expected to continue to ensure good academic results while working hard to meet *additional* criteria stated in the school appraisal standards. This has made the work of the school principals more, not less, demanding, as a principal puts it:

> Because on the one hand, there's exam-oriented education, we cannot throw that away because it's related to college entrance rates. But every school also needs to focus on its students' abilities; every school must have special characteristics, to develop its students' potential.

Compared to the past, therefore, there is greater, not less, accountability and centralised control for the Shanghai schools.

Conclusion

This chapter discussed how the Shanghai authorities rely on the school appraisal system to balance school autonomy and accountability. It illustrates the phenomenon of decentralised centralisation as manifested in the 4 dynamic processes. First, the dynamics of initiation is evident in the authorities taking the lead to initiate the curriculum reform for the schools to implement and be accountable for the results. The dynamics of content is demonstrated in the school-based curriculum and special characteristics that all the schools have to design and roll out. The autonomy given to the schools is paradoxically accompanied by standardisation and some degree of central control based on the criteria in the school appraisal system. There is also the dynamics of levels at work based on the decentralisation of tasks and a delegation of administrative responsibility to the school level, with the schools remaining under the control of the district and municipal authorities. All the above

point to the dynamics of simultaneity – the simultaneous practice of centralisation where the supervisory authorities set the central goals and standards for outcomes, and decentralisation where the means and the responsibility for implementation are the duties of the schools.

In their comparison of modernisation in East Asia and the West, O'Connor and Xin (2006) assert that 'modernisation the East Asian way occurs without the social and cultural dislocations which many saw happening in the West as it is modernisation via an authoritarian state-directed market with an emphasis on social hierarchy' (p. 273). Their observation also applies to curriculum reforms in Shanghai as its authorities endeavour to modernise the school system and various aspects of school management while maintaining centralised control and hierarchy. Or, to return to my metaphor of Chinese calligraphy, the calligrapher's subjective interpretation – analogous to the schools' design of curricula and special characteristics – is encouraged as long as the rules used to assess calligraphy – analogous to the school appraisal system – are strictly abided by.

Another tool used by the Shanghai authorities to maintain centralised control is something that is both loved and hated by many Chinese: the exam system. This is the topic for the next chapter.

References

Anon. (2007). *Dui Shanghaishi Peijiashuangyu xuexiao fazhanxing dudao de pingjia baogao* [Evaluation report of the school developmental and supervision of Shanghai Peijiashuangyu School]. http://fzxpj.cersp.com/XXPJ/200703/2332.html. Accessed 4 Feb 2012.

Lee, C.-K. J., Ding, D., & Song, H. (2008). School supervision and evaluation in China: The Shanghai perspective. *Quality Assurance in Education, 16*(2), 148–163.

Ministry of Education. (2002). *Jiaoyupo guanyu jiji tuijing zhongxiaoxue pingjia yu kaoshi zhidu gaige de tongzhi* [Notice by the Ministry of Education on actively advancing the appraisal and exam system reform of secondary and primary schools]. http://www.jincao.com/fa/03/law03.s21.htm. Accessed 12 Mar 2012.

O'Connor, J., & Xin, G. (2006). A new modernity?: The arrival of 'creative industries' in China. *International Journal of Cultural Studies, 9*(3), 271–283.

Shanghai Municipal Education Commission. (2003). *Shanghaishi jiaoyu weiyuanhui Shanghaishi renmin zhenfu jiaoyu dudaoshi guanyu yingfa 'Shanghaishi jiji tuijing zhongxiaoxue "xuexiao fazhanxing dudao pingjia" de shishi yijian'* [Notice by the Shanghai Municipal Education Commission and Shanghai Municipal People's Government Educational Supervisory Office on issuing 'Implementation opinion on Shanghai actively advancing "School developmental supervision and evaluation" for secondary and primary schools']. http://www.shmec.gov.cn/html/xxgk/200305/410032005002.php. Accessed 12 Mar 2012.

Shanghai Municipal Education Commission. (2005). *Shanghaishi jiaoyu weiyuanhui, Shanghaishi renmin zhenfu jiaoyu dudaoshi guanyu yingfa 'Shanghaishi jiji tuijing zhongxiaoxue "xuexiao fazhanxing dudao pingjia" de shishi yijian'* [Notice by the Shanghai Municipal Education Commission and Shanghai Municipal People's Government Educational Supervisory Office on issuing 'Some opinions on deepening and perfecting the work of 'School developmental supervision and evaluation']. http://www.shmec.gov.cn/html/xxgk/200501/410012005001.php. Accessed 12 Mar 2012.

Shanghai Municipal Education Commission. (2007a). *Shanghaishi zhongxiaoxue kecheng yu jiaoxue gaige xianzhuang diaocha baogao* [Survey report of Shanghai secondary and primary school curriculum and teaching reform]. http://xbyx.cersp.com/xxzy/ztlw/200711/2002.html. Accessed 3 Mar 2012.

Chapter 10
Testing Times: Exams as Means of Central Control

Photo 10.1 An ancient chart showing how scholars were promoted to civil officials through the imperial exams. The sign at the top of the chart reads 'Painting of civil officials promoted to high ranks'

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_10,

Formal assessment has a long illustrious history in China (Zhang, 2009). An ancient form of student assessment was used as far back as the Western Chou dynasty (c. 1027–771 BC). During the Han dynasty, written exams were introduced for the selection of imperial officials, thus began a formal link between being a scholar and a state official. The exam system was further refined during the Three Kingdom period where the Wei state conducted the imperial college exam once every 2 years and used the 5 classics based on Confucian texts as its content.

But the evolution of the exam system reached its height during the Tang dynasty where 6 types of exams such as enrolment exams and graduating exams were introduced. Different levels and types of schools proliferated during that period to prepare students for various kinds of tests. Although the imperial exam system was formally abolished during the Qing dynasty in 1905, the exam system has left an indelible mark on the psyche of the Chinese. Commenting on China, Zhang (2009) observes that 'exams permeate into the entire process of the student learning' (p. 328). Li and Li (2010) add that the imperial exam system, 'by focusing on text learning rather than practising, and mechanical memorising rather than innovation, has entrenched the value of exam scores and competition deeply into our national culture' (p. 212).[1]

It's not just students who have to sit for exams. Adults have to sit for all kinds of assessments for employment, recognition and promotion in China. Formal assessment does not just refer to exams; it includes all competitive and selective processes whereby children and adults are assessed based on their performance of specific tasks, and a winner is selected based on what is perceived to be a fair, transparent and scientific selection process. The stakes are high: the reward could come in the form of high scores, a coveted position, prizes, awards, public accolades and high social status.

In the previous chapters, we saw how the Shanghai education system illustrates the phenomenon of decentralised centralism. This refers to the paradoxical existence of decentralisation at the local levels with concomitant centralised control at the top. This chapter continues our discussion by focusing on the exam system in Shanghai.

The Dynamics of Centralisation and Decentralisation

The decentralisation of tasks and delegation of administrative responsibility to the local levels are accompanied by the introduction of national standards and the development of national assessments. In other words, there is evidence of the simultaneous practice of decentralisation being countered by a good deal of

[1] This is not to say that the current form of exam in Shanghai/China is simply a return to the imperial exam system. Woronov (2008, pp. 2–3) rightly points out that China's current exam system is not merely a relic of the ancient imperial exams, but reflects the ideology of the reform era that emphasises scientific rationality, objectivity and accuracy.

regulatory re-centralisation. The re-centralisation of national standards is seen in the high-stakes terminal exams and other forms of tests for various grades. These tests and exams are assessments that are standardised at the district or municipal levels.

Terminal Exams

There are two terminal exams that Shanghai students have to sit for: zhongkao which is the junior secondary exam and the gaokao which is the national higher education entrance exam. Currently the zhongkao assesses students in 6 compulsory subjects, namely Chinese (150 marks), mathematics (150 marks), foreign language (English) (150 marks), physics and chemistry (a combined paper that adds to 150 marks) and physical fitness (30 marks). The total marks is 630.

Similar to zhongkao, the gaokao requires students to sit for 3 compulsory subjects, Chinese (150 marks), mathematics (150 marks) and foreign language (English) (150 marks). In addition, students have to sit for another subject of their choice (150 marks), depending on whether they specialise in the sciences (in which case they may choose physics, chemistry or biology) or in the humanities (in which case they may choose politics, history or geography). The total marks is 600.[2] The two terminal exams are high-stakes exams, as they determine whether the students will be admitted into a senior secondary school or a university of their choice.

At the senior secondary level, there is another exam that the students have to sit for, known as 'Schoolwork Standard Exam' [xueye shuiping kaoshi]. Implemented since 2009, this exam assesses the students' performance in 10 academic subjects, taken over a period of 3 years. The 10 subjects are: (1) language (Chinese) (2) mathematics (3) foreign language (English) (4) physics (5) chemistry (6) life sciences (7) Information technology (8) geography (9) history and (10) Ideology and politics. The schedule, using the exam timetable for 2009 as an example, is as follows (Shanghai Municipal Education Commission, 2009):

- Year 1: Information technology and geography
- Year 2: History, physics, chemistry and life sciences
- Year 3: Language (Chinese), mathematics, foreign language (English), ideology and politics

The Schoolwork Standard Exam questions are set by the municipal authorities and are mostly answered using the pen-and-paper format. The exceptions are information

[2] Prior to 2012, senior secondary students have to take an additional subject known as 'Integrated Ability Assessment' [zonghe nengli ceshi] for gaokao. Comprising 30 marks, this subject included content from physics, chemistry, biology, politics, history and geography. In explaining the removal of this subject, the Shanghai authorities noted that the content of this subject is already covered in another exam, the 'Schoolwork Standard Exam', and therefore, it should be scrapped to lighten the schoolwork burden of the students (Zongguo jiaoyu bao, 2012).

technology, which involves an online assessment; the English language, which, on top of a written paper, includes listening and speaking; and physics, chemistry and biology, which include experiments/technical operations. Unlike the gaokao, the subjects are not graded based on marks but on grades, namely, A (20%), B (30%), C (25%) and 'Fail'. The objective of the exam is to ensure that the students meet a minimum level of competency in core academic subjects. The zhongkao, gaokao and Schoolwork Standard Exam collectively ensure that the schools, while enjoying a degree of autonomy in school management and curriculum design, do not neglect the academic standards of the students.[3]

District-Level Tests

Besides the standardised exams at the municipal level, there are district-level tests for all students. This applies to students of all grades, including the primary level where there is no terminal exam. Each district sets its own exam papers that are completed by the students in their district before the gaokao. These questions are prepared by educational experts such as senior teaching-research officers, special-grade and senior teachers of the respective districts.

The district also organises a 'Teaching Quality Test' [jiaoxue zhiliang jiance] every term; it is a standardised test for the district, but the students from that district are picked randomly. Each time, the district will pick about one-third of the students from a particular grade. The schools in that district will not be informed of the subject, grade and students selected until the day of the test when the teachers collect the test papers from the district officials. A primary school principal explains how this works in keeping all the schools (their teachers) on their toes:

> This term there are 2 subjects tested, Chinese language and mathematics. Last term, 3 subjects, Chinese, mathematics, English language. This means students do not need to take the test unless they are selected. But all the main subject teachers need to prepare because their subjects may be the one chosen. The district education bureau will compute the results and give feedback to the schools. The results are not officially announced but everyone is well aware of the results. So the pressure for principals, teachers and parents is very great because we will know our own standards as well as those of other schools.

These tests do not just assess the students' academic quality but also other aspects of their lives such as their sleeping hours, reading habits, home tuition, subjects they like, etc. This further sends a message to the schools to focus not only on the test

[3] In the past, junior secondary students have to sit for the 'Junior Secondary Graduating Exam' [chuzhong biye kaoshi]. This is different from the zhongkao that determines whether students will be admitted into a senior secondary school of their choice. The education bureaus of the various districts set the Junior Secondary Graduating Exam. However, since the mid 2000s, the content of this exam has been incorporated into the zhongkao in order to reduce the students' excessive burden in schoolwork and exam preparation. But at the senior secondary level, students still need to take two exams: the Schoolwork Standard Exam and the gaokao.

scores but the students' holistic development – the goal of quality-oriented education. The information is then given to the schools as feedback for them to review their teaching quality and improve their practices. As a vice-principal notes:

> It's quality control, a direction for schools. It gives direction to teachers and students for the next term by giving detailed feedback on the average scores, every student' scores, what's inadequate. So for example, the teaching-research group leader for English language will know which aspects of English teaching are adequate, and which are not. This ensures that students have a high level of understanding ability.

Not only do the students and schools feel the stress to perform well in exams; the districts themselves are also under pressure to deliver high test scores and good performance. Zhang (2008a, 2008b) points out that every district bears pressure from the municipality to improve student exam scores as the municipal authorities compare and provide all districts with information on the average score of each subject across the districts (p. 293). This is acknowledged by one school principal:

> The appraisal system still relies on college entrance rates as an indicator that can be measured. Some education administration departments, in inspecting a school's work, use college entrance rates as the 'hard indicator' [yingzhibiao] for competition between districts and education bureaus. Some even have a yearly contract with the school, and reward or punish the school based on the situation. … So the students' schoolwork results do not just determine the students' future and destiny, they also determine the success and failure of the teachers, the school and even the district's education standards.

Photo 10.2 A teacher answering her students' queries after class. The student on the right is waiting for her turn

Another measure to ensure quality control is the ranking of schools and students. Although the authorities have prohibited public ranking of schools since the 1990s, it appears that an unofficial ranking of schools, including the subject performance of each school and their students are still carried out by at least some district authorities. A teacher of a senior secondary school said: 'Actually the administrative department is not supposed to rank the schools but it's being done in reality.' Students I interviewed also told me that they know their rank in their class, grade and even district. For the last type of ranking, students are told where they stand based on percentiles, for example, a student will know that her score is in the 90th percentile of her cohort in the district. All the above function as quality assurance measures as well as a means of centralised control even as the schools are given the power to design and launch school-based curriculum.

Exams: Love or Hate?

'We love and hate exams', said a vice-principal exasperatedly. 'They increase our stress, yet they're the fairest', she said, as other principals and vice-principals in the room with us nodded in agreement.

The vice-principal has summed up the Chinese's ambivalent views towards exams. On the one hand, there are compelling reasons why exams are the best mode of assessment with which to appraise students, teachers, principals and schools. As the world's most populous country and the biggest education system, China needs a standardised assessment system that is widely perceived by the Chinese population to be transparent, scientific and fair.

The preferred form of assessment in China is summative rather than formative, and pen-and-paper assessment rather than performative tasks such as oral presentation. A Chinese academic explains why a summative and closed-book written exam system is privileged in China:

> In China, education's main function is selection. Through the screening of exams, people are allocated different grades, including different grades of schools, different grades of work places, different grades of social position. … Our country has a huge population with limited resources, so it can only allow a limited number of people to receive higher education and enjoy excellent educational resources. Therefore education needs to fulfill the selection function. To ensure that the selection is fair, standardised closed-book exams become the only choice. (Shangguan, 2005, pp. 283–284)

The preference for a written exam format with closed-ended questions is due partly to the legacy of the imperial exams and also to the general consensus that such a format is less open to subjective interpretation, bias and corruption. In a society where 'human connections' [guanxi] prevail and people are conscious of instances of abuse of power, exams are seen to be the 'safest' and surest way for everyone, with or without connection, to have a shot at academic success. 'Regardless of your family background and standard, all must take the same exam, and if you're good, you can go to university', said a vice-principal. 'If we do not have the gaokao', she added, 'when you get a job, many employers will wonder if it's due to some tricks, there's no fairness.'

The Chinese preference for competitions also stems from a cultural emphasis on outcomes and the mastery of skill that are revealed only when one pits one's knowledge and skills against others. Shangguang (2005) observes that many Chinese think that 'only when you obtain a prize, become a winner, then there's meaning in the learning process' (p. 33). Hence, the implementation of various exam-related measures such as the Schoolwork Standard Exam, district-level tests and school ranking, although stressful, are seen to be necessary. The public trust in formal assessment explains why the authorities maintain centralised control in and quality assurance through standardised and high-stakes exams. We see here strong evidence of cultural scripts that shape the Chinese's views of learning and assessment.

However, a society where people, from the school leaders to the students, are constantly being evaluated and ranked is a highly stressful and competitive place to live in. The competition is so intense that every mark, or half a mark, counts. Unsurprisingly, a survey of students in Shanghai shows that the two greatest problems faced by primary and secondary school students are 'schoolwork results' and 'college entrance rates' (Lu, 2005). The experience in Shanghai mirrors the case in China as a whole. In a national survey, nearly 87% of Chinese students said that they face heavy schoolwork pressure arising from expectations from themselves and their parents, as well as from competition with their schoolmates (Survey: Chinese students stressed most about school, People's Daily Online, April 9, 2010). A 'Survey of happiness state of secondary and primary school teachers in Shanghai' conducted by Fudan University and a newspaper (Dongfang Jiaoyu Shibao) on a sample of 1,426 teachers from 29 schools informs us that their greatest source of pressure is their students' results (Jiefangribao, 2011).

But even if change to the exam system is needed, it is unlikely for standardised exams to be replaced. 'Our country is big with limited resources, so it's not possible to achieve big changes in the same system', said a principal. 'With big changes, there'll be chaos', she averred. Given the sociocultural circumstances and constraints in China, it is also very challenging to move away from summative and written assessment modes to formative and alternative assessments. As one vice-principal candidly puts it, 'We live in a social environment where the values of "integrity and justice" have not been fully established, so everyone still widely thinks that "scores are really the fairest" [fenshu caishi zui gongzhengde].' Perhaps aware of this, what the Shanghai authorities have done instead is to keep the standardised exams but tweak the exam formats. As explained by a school principal:

> There are already changes in the zhongkao and gaokao, in content and format. Meaningful changes that help bright students stand out. We are interested in the students' learning process and innovative development. But we cannot use formative assessments, as the subjective elements in them are too strong. How to assess students, who to assess them, which assessment standards to use, these are the questions to ask. Our country is still in the flux of change.

That is why the vice-principal, representing the sentiments of many Chinese, remarked on the love-hate relationship with exams. Despite the persistent and immense stress that comes with formal assessment, there remains a general perception that 'exam is still the fairest'.

Conclusion

This chapter discussed how the Shanghai authorities utilise various forms of assessment at the municipal and district levels to ensure that the standards of students and schools are not compromised even as schools are given greater autonomy. It is interesting to note the cultural scripts of collectivism, conformity and social hierarchy in Shanghai/China; this is seen through the administration of various standardised assessments on the one hand, and individual effort and self-interest through one's performance in the same assessment on the other hand.[4] The concomitant emphasis on collectivism and individuality ensures that the exam system is used effectively for centralisation and decentralisation.

That the Shanghai municipal and district authorities adopt decentralised centralism as a means of control does not mean that policy implementation is smooth or uniform. As mentioned in the introductory chapter, the space of the assemblage is the contested site of interplay between the global and local forms and among the stakeholders. What we see here is the Shanghai municipal government playing the role of a dominant assembler in the educational landscape. Through ideas such as 'quality-oriented education' and 'school supervisory development' and practices such as introducing expanded and inquiry/research courses and maintaining centralised high-stakes exams, the Shanghai Municipal Education Commission aims to ensure that schools carry out their official policies dutifully.

However, the other educational stakeholders are not passive recipients of policy implementation. Rather, the recognition of the primacy of exams and the need to balance the implementation of quality-oriented curriculum reforms with exam results mean that school principals, teachers, students and parents have their own logics, tactics and countermeasures. We have seen how, for example, different districts compete to improve their college entrance rates through introducing various disciplinary measures such as the 'Teaching Quality Test'. Shanghai teachers also respond strategically by giving extra classes to their students after school hours and even on Sundays during the exam period (see Chap. 4 for details). Parents too assemble their battery of tactics such as signing their children up for weekend tuition classes (see Chap. 5 for details, and Tan, 2012).[5]

[4] Andrew Kipnis (2011, p. 111) maintains that 'the atomising, competitive pursuit of exam success as the overwhelming imperative of secondary schools contradicts lessons about self-sacrifice for the collective good'. But I do not see the two as contradictory but complimentary in the Shanghai context. Shanghai students, teachers and principals are motivated to pursue exam success because they know that their individual efforts will be rewarded. At the same time, they know that they, as a collective body, will share the honour and glory of their school's success. In other words, it is plausible for a Chinese to sacrificially work hard both for the collective good and individual reward. This combination of self-interest and group interest is also exemplified in teacher competition. See Chap. 18 for details.

[5] It is instructive that a Chinese academic Ding Xiaojiong introduces the term 'structural fracturation' to refer to rifts between (and sometimes within) multiple layers of governments that leads to a discrepancy between education policy and implementation in China. This supports my argument about the contested space of the assemblage involving many and competing forms, stakeholders and (counter)measures. For details, see Ding (2010).

Given that assessment drives human behaviour, the format of the exam and types of questions asked have a direct impact on what goes on in the classroom. This means that to further understand the practices in Shanghai schools, we need to take a closer look at the exam questions in the next chapter.

References

Ding, X. (2010). Policy implementation in contemporary China: The making of converted schools. *Journal of Contemporary China, 19*(64), 359–379.

Jiefangribao. (2011, September 8). *Shanghai tongji: Zhongxiaoxue jiaoshi zuida yali yuanzhi 'fenfen jijiao'* [Shanghai statistics: Secondary and primary school teachers' greatest pressure originates from 'every mark counts']. http://www.wyedu.net/show.php?contentid=10851. Accessed 12 Jan 2012.

Kipnis, B. A. (2011). *Governing educational desire: Culture, politics, and schooling in China*. Chicago: The University of Chicago Press.

Li, W., & Li, Y. (2010). An analysis on social and cultural background of the resistance for China's education reform and academic pressure. *International Education Studies, 3*(3), 211–215.

Lu, C. (2005). Shanghaishi zhongxiaoxue sushi fazhan xianzhuang yanjiu baogao [Research report of current situation of the quality development of Shanghai secondary and primary school students]. *Xuhiu jiaoshiwang*. http://tpd.xhedu.sh.cn/cms/data/html/doc/2005-09/02/54569/index.html. Accessed 8 Feb 2012.

Shangguan, Z. M. (2005). *Jiaoyu de guoji shiye* [Education's international vision]. Shanghai: East China Normal University.

Shanghai Municipal Education Commission (2009). *Guanyu yingfa 'Shanghaishi putong gaozhong xueye shuiping kaoshi shishi xize (shixing) de tongzhi* [Notice regarding issuing 'Implementation conditions (trial) for Shanghai ordinary senior secondary academic standard exam']. http://www.shanghai.gov.cn/shanghai/node2314/node2319/node12344/userobject26ai19875.html. Accessed 7 Feb 2012.

Tan, C. (2012). The culture of education policy making: Curriculum reform in Shanghai. *Critical Studies in Education, 53*(2), 153–167.

Woronov, T. (2008). Raising quality, fostering 'creativity: Ideologies and practices of education reform in Beijing. *Anthropology and Education Quarterly, 39*(4), 401–422.

Zhang, R. (2008a). *Jujiao youxiao jiaoyu de shinian* [Ten years of focused and effective education]. Beijing: People's Education Press.

Zhang, X. (2008b). *The role of teacher appraisal in teacher professional development: A case study in schools in Shanghai.* Doctoral dissertation, The University of Hong Kong. http://hub.hku.hk/handle/10722/51240. Accessed 12 Jan 2012.

Zhang, X. (2009). *Zhongguo jichu jiaoyu pingjia de jibi yu genxing* [The disadvantages and renewal of basic education appraisal in China]. Beijing: Educational Science Publishing House.

Zongguo jiaoyu bao. (2012). *Shanghai quxiao gaokao 'zonghe' kemu zongfen jiangshi 600 fen* [Shanghai abolished 'Integrated' subject for senior secondary exams, the total marks is reduced to 600]. http://edu.sina.com.cn/gaokao/2012-03-29/1022332781.shtml. Accessed 2 Apr 2012.

Chapter 11
Examining the Exam Papers

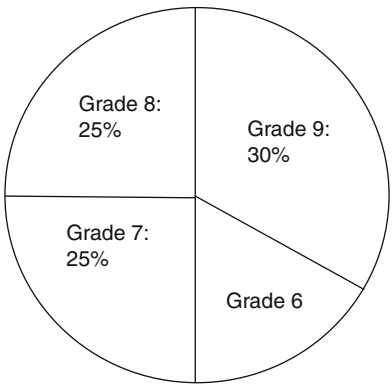
How good are you in mathematics? Let's take a test!

Mathematics

In order to understand the physical fitness level of boys in a junior secondary school, a school conducted a survey on boys from grade 6 to grade 9. The boys selected for the survey have to sit for a pull-up test. The table below shows the number of pull ups completed by the boys surveyed:

Number of pull-ups	0	1	2	3	4	5	6	7	8	9	10
Number of persons	1	1	2	2	3	4	2	2	2	0	1

The percentage share of the students tested in each grade is shown below (the percentage for grade 6 is not given):



Based on the above information, answer the following questions:

1. The percentage share of grade 6 students tested is ———.
2. Among those tested, the number of grade 9 students tested is ———.

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_11, © Springer Science+Business Media Dordrecht 2013

3. Among those tested, the percentage share of students who completed not fewer than 6 pull-ups is ———.
4. Among those tested for pull-ups, the modal number is ———.

The mathematics question is meant for 14-year-old and 15-year-old students. It is taken from the zhongkao paper for 2009 (Sun, 2010, p. 18 of 2009 exam paper). (For the answer, see the footnote).[1]

If mathematics is not your cup of tea, how about writing an essay?

Essay Writing

A young monk joined a monastery and was curious about many things. It is autumn and many red leaves have filled the compound of the Buddhist temple. The young monk asked his master: 'The red leaves are really beautiful, why must they fall off the tree?' Master smiled and said: 'Because winter is coming, the tree is unable to support so many leaves, and has to shed them. This is not giving up, but letting go!'

Based on the information above, formulate your own essay title and write an essay in not less than 800 words.

The essay question above is meant for 17-year-old and 18-year-old students. It is taken from a district exam paper for senior secondary students in 2011(Anon, 2011a, p. 21).

The above questions are typical of exam questions in Shanghai today. They are part of the Shanghai authorities' endeavours to move away from an exam-oriented education characterised by memorisation and repeated practice of past exam questions to quality-oriented education where students are equipped with the ability to think reflectively and independently.

This chapter summarises the key findings from a content analysis of recent exam questions for junior and senior secondary students in Shanghai. For the junior secondary level, I analysed exam questions from 5 subjects: Chinese, English, mathematics, physics and chemistry. These 5 subjects, plus physical fitness, are the compulsory subjects all junior secondary students have to sit for at zhongkao. For the senior secondary level, I analysed not the gaokao papers but the senior secondary exam papers set by 12 districts in Shanghai for 3 compulsory subjects in 2011: Chinese, English and mathematics. The standard of the papers are similar to the gaokao since the former is specially designed to prepare the students for the

[1] The answers are provided by the publisher in Sun (2010), p. 18 of the 2009 exam paper. For this publication, the page numbers do not run sequentially throughout the book but are numbered sequentially within each year of the exam paper. This means that all the exam papers will start with page 1. The answers are as follows:

(1) $100\% - (25\% + 25\% + 30\%) = 20\%$.

(2) $30\% \times 20 = 6$.

(3) $\frac{7}{20} \times 100\% = 35\%$.

(4) The modal number is 5.

gaokao. By analysing the districts' questions, I was able to access gaokao-type of questions as well as understand the range of questions set by the districts as part of the curriculum reform. The editors of the collection of district-level senior secondary exam papers have noted this point:

> The papers are papers taken by students in the district before the senior secondary exam [gaokao]. They reflect the new thinking and design of gaokao reform, gather the direction and regulation of the gaokao in the coming years, shows the novel characteristics and assessment demands of the various districts towards revision in gaokao, and are written by senior teaching research officers, special-grade and senior teachers of the respective districts. (Anon, 2011a, n.p.)

Photo 11.1 Assessment books on past year exam papers for junior and senior secondary levels

Junior Secondary Exam: Chinese Language

Since 2009, there has been a change in the exam format for Chinese language papers – the same year in which the new assessment methods under the second phase curriculum reform were implemented. (All the exam questions are taken from Anon, 2009.) Prior to 2009, the exam format comprised 3 sections: Classical Chinese, Modern Chinese and Essay Writing. The section on Classical Chinese required students to complete a dictation passage from memory, explain the meaning of words and complete questions based on 2 comprehension passages drawn from classical texts. The next section, Modern Chinese, required students to complete questions based on 2 comprehension passages, while the last section required students to write an essay. However, since 2009, a new section on Accumulation and

Application has been introduced. This addition signals a concerted effort by the authorities to emphasise practical application abilities in students.

An analysis of the exam questions shows that memorisation is still required as students need to complete a section on dictation where they have to answer questions on classical sources. But the memorisation component has been significantly reduced, from about one-third of the paper before 2009 to about one-tenth of the paper from 2009 onwards. What is striking about the papers is their emphasis on the students' ability to think reflectively and apply what they have learnt. This is evident in 3 main ways.

First, the comprehension passages are not taken from the textbooks. In other words, they are unknown texts to the students. So the students cannot expect to ace the paper just by relying on the textbook. Secondly, the comprehension passages under the Modern Chinese section are about everyday life. This is designed to prompt students to apply what they have learnt to the real world. For example, the 2006 paper contains a passage on the importance of water and a heart-warming story of the relationship between a boy and a bookshop owner in China. Thirdly, the comprehension questions test students on complex and higher-order thinking. The thinking includes the ability to compare and contrast, synthesise, analyse, evaluate, form one's own judgement, provide personal applications, etc. Below are some examples. (The year of the paper and the page numbers of the source are given at the end of each question, e.g. p. 2006–8 means page 8 of the 2006 exam paper.)

Examples of Questions

Summarising

- From the whole passage, which of the sentences below best captures the meaning of the title 'Young Flag'? p. 2008–19

Synthesising and analysing

- Based on the author's discussion in paragraph 3, select and analyse an incident in Chinese history to illustrate how 'weakness triumphs over strength'. p. 2006–11

Comparing and contrasting

- If we change the sentence in paragraph 9 to '….', how would the effect of the original sentence differ from the new sentence ? Give your reasons. p. 2006–11

Forming one's own judgement

- The young man returned to the bookshop 15 years later. Give your views about his act of gratitude. p. 2006–11

Personal application

- Choose a scenario that touches you the most, and write an essay of about 80 words to express your sentiments. p. 2007–15

Junior Secondary Exam: English Language

The exam format for English comprises 3 sections: Listening, Vocabulary and Grammar, and Reading and Writing. (All the exam questions are taken from Wu, 2010a.) As the English language is taken as a foreign language in Shanghai, the standard is pitched at a level meant for non-native speakers. Drawing upon my training and experience as an English language teacher, I think the standard of English language for zhongkao (for students who are 14 and 15 years old) is equivalent to that of upper primary level in Singapore (for students who are 11 and 12 years old) where English is taken as the first language. Perhaps because Shanghai students seldom have the opportunity to use that language in everyday life, there are a number of questions that do not require students to write in prose format. Instead, students just need to answer true or false questions, answer multiple-choice questions and fill in the blanks with helping words. But in line with the aim of the curriculum reform, there is a discernible emphasis among the questions on developing the students' real-world application.

Examples of Questions

Questions are international in content

- On Napoleon, p. 2008–22
- On German scientist Hermann Ebbinghaus, p. 2009–31
- On Mother's Day in the USA, p. 2007–22
- On a survey in Britain, p. 2010–27
- On a strike in London Underground, p. 2006–29

Questions are linked to real life

- References to Shanghai Expo, example: 'We are lucky ——— ——— hold the 2010 Shanghai Expo', p. 2008–17
- References to famous Chinese, example: '——— ——— excellent Chinese basketball player Yao Ming is!' p. 2008–16,
- AIDS virus, p. 2008–23

Questions on personal application

- 'What kind of person do you think Kathy Howe is? p. 2008–29
- In your opinion, what is 'true beauty'? p. 2010–30
- Write an essay on 'I have a dream'. p. 2006–31

Junior Secondary Exam: Mathematics

The exam format comprises 25 main questions, each with several sub-questions. (All the exam questions are taken from Sun, 2010.) The percentage of multiple-choice questions is less than one-fifth of the total number of questions. This means

that students cannot expect to score just by making guesswork. The questions comprise a combination of conceptual and application questions. There is evidence of linking mathematics to real-life scenarios and current situations.

Examples of Questions

Questions require a demonstration of high-level mathematical abilities

- Q22-1 is a question on the residents' views on their living conditions, p. 2010–17. This question tests the students' ability to extract relevant information from the pie chart and use it to solve the problem.
- Q25 is a question on trigonometry, p. 2009–26. This question involves a number of knowledge points. It tests the students' conversion ability, proof ability, calculation ability and visual ability in understanding the dynamic diagrams and applying their integrated thinking to solve problems.

Questions on practical application by making references to everyday issues

- Q22 is a question on the number of people who visited World Expo, p. 2010–16.
- Q20 is a question on the extent of people's satisfaction about the traffic situation in a city, p. 2006–1.

Junior Secondary Exam: Physics

Like the other subjects discussed earlier, the physics exam questions test the students' ability to extract information from diagrams and pictures, understand real-world issues and possess knowledge of experiments. (All the exam questions are taken from Zhang, Zhou, & Han, 2010.) The multiple-choice questions, although still retained, comprise about one-third of all the questions.

Examples of Questions

Questions on current issues

- Q10-2 tests the concept of force in the context of the 2010 Winter Olympics held in Vancouver, p. 2010–10.
- Q3 tests the concept of speed in a football competition from the 18th World Cup held in Germany, p. 2006–2.

Questions on application of knowledge to everyday life

- Q4 is about the velocity of vehicles on Shanghai's longest expressway, p. 2006–3.

- Q16 is a question on mass based on Yao Ming's wax figure at Shanghai's Madame Tussaud museum, p. 2006–14.
- Q8-1 tests the concept of buoyancy based on the arrival of the Swedish sailboat, the 'Gothenburg' in Shanghai, p. 2007–1.

Questions that test students' knowledge of experiment

- Q24-1 is about an experiment exploring images from a plane mirror, p. 2010–25. Students need to fill in the blanks based on an experimental report with partial information given on the experiment's target and the equipment used.

Junior Secondary Exam: Chemistry

Multiple-choice questions comprise about one-third of the total number of questions in the 2008–2010 exam papers. The exam format features a strong emphasis on real-life application. (All the exam questions are taken from Anon, 2010) This has been noted by the editors of the collection of exam papers in their comments on the 2008 paper:

> To bring out the special characteristics of Chemistry, the questions, while emphasising foundational knowledge and ability, underscore the application of Chemistry to production, life, society, science and technology etc. Many questions are about practical social and life cases that the students have come into contact with or are aware of, for example Q2 and Q3 on salt water, milk, peach juice, Q9 deals with safety awareness, how to handle an incident, the materials used on the outer wall of 'Shuilifang' [name of Beijing Olympics swimming pool], Q22 is on the production of running water used by people etc. These tests' content is closely linked to students' life and practical activities, focusing on testing the students' ability to apply Chemistry knowledge to solve actual problems. The questions also emphasise the students' analytical ability in the context of Chemistry experiments, and are concerned with students' application of Chemistry principles in production, such as how to manage industrial waste, and how to make use of recycled resources. These questions help students feel that Chemistry has enabled our lives to be better. (Anon, 2010, p. 2008–1)

Examples of Questions

Questions that are linked to real life

- Q2 is on the chemical composition of milk, air, etc., p. 2009–2.
- Q28 is on industrial waste, pp. 2009–28 and 29.

Questions that are linked to current affairs

- Q21-2 tests the chemicals used to ensure that the swimming pool of the 2008 Beijing Olympics met international standards, p. 2009–19.
- Q5-1 is about the gases involved in the recent explosions at coal mines in China, p. 2010–5.

Questions on conducting good experiments

- Q27 features a student conducting an experiment. Based on information given, students are asked to fill in the blanks, pp. 2009–26, 2009–27. Commenting on this, the editors note: 'This question explores the experimental reaction of copper oxide with copper which produces a gaseous product, and tests the students ability to observe the experiment phenomenon, correctly write down the relevant reaction using the appropriate chemical formula, and demonstrate their comprehensive ability in exploring reactions with other substances' (Anon, 2010a, p. 2009–27).

Senior Secondary Exam: Chinese Language

Like the Chinese language paper for the junior secondary exam, the senior secondary exam paper tests students' knowledge and application of classical and modern Chinese texts. (All the exam questions are taken from Anon, 2011b.) A significant difference between the junior and secondary papers is that there is a greater emphasis in the latter on the students' ability to reflect, analyse and form their own judgements.

What is noteworthy is the essay-writing component. An example was given at the start of this chapter. No essay title is given to the students; instead, the students are given a short write-up, asked to adopt a perspective, formulate their own essay title and write an essay. Such a task is demanding as it requires a number of skills: the ability to grasp the central meaning of the paragraph regarding a real-life scenario, the ability to choose a personal angle to focus on, the ability to craft an essay title that is concise yet precise in bridging the information given and the student's interpretation, and the ability to write an essay that is relevant, cogent, coherent, expressive and well written. In short, the task demands high-level reading and writing abilities.[2] Below are sample questions that highlight the abilities and thinking skills required of students, with the source (name of district) and page numbers given.

[2] Here is another example of an exam question set by a district. Changning district's essay: Based on the information below, adopt a perspective, formulate your own essay title and write an essay in not less than 800 words.

> 'Two old men are playing a game of chess in a park. They play it very slowly, making the observers feel impatient. An old man commented humorously: 'You are not aware of this, but chess should be played slowly. Playing it slowly allows you to experience deeply the infinite changes and joy of chess; playing it fast gives us a murderous atmosphere, not like chess played among friends. Furthermore, once you place a piece on the chess board, the game begins to head towards death. If we rush through it, the chess board will be filled up fast, the chess will be dead. Good chess should be played slowly!'. Such a profound speech made the observers reflect deeply (Anon, 2011c, p. 10).

Examples of Questions

Questions are linked to real-life application

- Huangpu (Jiading) district: passage on Chinese new year, p. 26
- Hongkou district: passage on the life of Ralph Waldo Emerson, p. 44

Questions on high-level thinking

- Changning district, Q10: 'Analyse the thinking and emotions expressed in paragraph 7'. p. 8
- Jing'an district, Q21: 'Based on the entire text, generalise Zhen Xuan's character traits'. p. 21

Senior Secondary Exam: English Language

The paper is similar to the English language exam for the junior secondary level, except that it is set at a higher standard. (All the exam questions are taken from Anon, 2011d.) There is also evidence of linking the content to the students' everyday lives and testing the students' complex thinking competencies.

Examples of Questions

Questions on high-level thinking

- Huwan district, Q68: 'What is the best title for the passage?' p. 5
- Huwan district, Q84: 'What is the main purpose of the text?' p. 7

Questions that are linked to current affairs and international perspectives

- Huwan district: Shanghai's Civil Affairs Bureau setting up temporary refuge for the homeless during winter, p. 3
- Changning district: Saudi Arabia's King Abdullah, p. 13

Questions that are linked to personal application

- Songjiang district: students need to write an essay based on survey results, represented in a chart, of senior year 3 students' motivations when applying for university.
- Hongkou district: students need to write an email to the principal on behalf of their senior year 3 class, p. 57

Senior Secondary Exam: Mathematics

Unlike the Chinese and English language papers at the senior secondary level as well as the mathematics paper at the junior secondary level; the mathematics paper at the senior secondary level appears to focus on more theoretical questions rather

than real-world issues and application. (All the exam questions are taken from Anon, 2011d.) Of the 12 papers from 12 districts, 8 papers contain only 1 or 2 questions on real-life applications, while 4 papers do not even have any application question related to the real world.

Examples of Questions

Questions on real-life application

- Pudong new district, Q21: students are presented with a situation in which they need to disinfect water due to water pollution from an earthquake and tsunami. They need to calculate the amount of disinfectant needed and the number of days the clean water will last based on a formula, p. 10.
- Putuo district, Q 20: 'To ease the traffic jam situation in the city, a certain city decided to raise the parking charges in the city. To implement accumulated charges, the city management asked for opinions on this charging standard: the charge will be $10 per hour, and after 1 h, an additional 50% charge will be incurred for every additional hour. After the policy was announced, there was much debate in the mass media. Using the mathematical principles you have learnt, explain the cause for the debate. If a car has been continuously parked for 14 h, how much should the charge be?' p. 26

Discussion

From our analysis of exam questions for the junior and senior secondary levels, there is a palpable attempt by the authorities to go beyond rote learning and memorisation. This was affirmed in my interviews with the principals and teachers who noted that the change in the exam format has been drastic and comprehensive. Specifically, we can identify 2 major changes that took place from the mid-2000s onwards.

First, there is a shift away from rote learning and memorisation towards higher-order thinking. In the past, there was a greater tendency for students to learn by rote as the exam questions were largely based on the textbooks and could be tackled by repeated practice and copious memorisation of facts. But the present focus of exams goes beyond the textbook to the students' complex and higher-order thinking ability. 'It's not enough to just rote-learn and memorise, the exam questions have changed', remarked a teacher who has taught for over 30 years in a junior secondary school. 'In the past, students needed to practise more', he added. 'Now the exam questions focus more on students' thinking process.' Another teacher concurred:

> More exam questions are open-ended when compared to the past. This is evident. Now many questions are not based on just writing down what you've been taught by the teacher. You need to analyse it before you can answer. Many questions are linked to life practice. This is the case for zhongkao and gaokao.

Explaining the change for Chinese language, a teacher said: 'In the past for Chinese language tests, students have to memorise a certain number of poems but now it's more on the thinking process. Now typical questions are: what's the implication of a paragraph, what's the effect of a sentence construction, key words and so on.' Another Chinese language teacher added:

> You need to teach students the method of reading passages, so if a student can do well for the exam, it means his reading ability has been formed. So it's about ability, it's not possible to just memorise. If you just memorise, you cannot get high marks in the Chinese language exams.

In the same vein, a physics teacher highlights the change:

> Under traditional education, we'll ask, 'Is it true that this thing is so and so'. Now students' horizons have expanded and the teacher needs to catch up. So the teacher uses open-ended questions like 'How do you do this?' 'How would you deal with this problem?' 'Which method would you suggest?' In the past, it's a 'one man show' [yirentang] for the teacher, but now it's about analysis, directing the students so as to motivate their thinking, for them to have a greater interest and development in Physics and exploration.

This change is reflected in the subject syllabi too. For example, the 2009 Shanghai Physics gaokao syllabus includes the history of physics, which among other things details the contributions of scientists John Newton and Thomas Edison towards science (Liu & Chen, 2011, p. 85).

Secondly, the focus now is engaging the students with real-life issues and applying what they have learnt to the real world. A teacher opined that the exam 'no longer tests you on textbook knowledge but your ability to apply textbook knowledge'. A principal said that the exam questions 'come from real life, so you need real life experiences, and not just rely on the textbook, you need to read more, watch the news, know current affairs'.

Take the example of English language. Rather than testing mere grammar, the emphasis is on language communication based on real-life application. 'In the past, English Language teachers focused on the textbooks, grammar; now we use materials from the newspapers, get students to compose their own stories, have debates, present their own viewpoints', said a vice-principal. The same applies to mathematics. A mathematics teacher from a junior secondary school said:

> Since 2000, for about 10 years, the junior secondary exam has undergone great changes. Since a few years ago, the mathematics questions have included mathematical ability. These are questions that include a lot of background information of the real world, they're not simple mathematics questions. You've to answer the question by first understanding and analysing the background information.

Conclusion

This chapter discussed how the Shanghai authorities have revised exam questions to emphasise higher-order thinking and real-world application. The change in the exam format and type of exam questions arguably put Shanghai students in good stead when they sat for PISA as they are likely to find the task of solving real-world

problems in the PISA questions easy. An analysis of the exam questions in Shanghai also informed us that it is a misconception to assume that Shanghai/Chinese students score in exams through rote learning and memorisation. This does not mean that memorisation and repeated practice are redundant and jettisoned in schools. After all, as noted earlier, the Chinese language paper still retains the dictation section, and you certainly need to memorise formulas and theories before you can apply them. But the point here is that the exam focuses on the students' demonstration of their thinking process and application abilities *with memorisation and repeated practice as a necessary foundation*.[3]

Tan Yibin from the Teaching Research Office of Shanghai Municipal Education Commission sums up the changes in Shanghai:

> People outside China said that Chinese children rote-learn and memorise. This is a misunderstanding. For many years, our curriculum has continued to emphasise experiments, [personal] viewpoints, application. We very much oppose a spoon-feeding method of teaching. In recent years, we are very concerned with testing the students' ability, not just testing their knowledge. (cited in Su, 19 December 2010)

References

Anon. (2009). *Boji zhongkao: 5 nian zhenti yu zuixin moni – Yuwen* [Fighting the junior secondary exam: Five years of past year questions and the latest stimulated questions – Chinese language]. Shanghai: East China Normal University Press.

Anon. (Ed.) (2010a). *Wunian zhongkao shiti toushi (2006–2010): Huaxue (Shanghai juan)* [Perspectives on junior secondary exam for 5 years (2006–2010): Chemistry (Shanghai paper)]. Shanghai: Shanghai Science and Technology Education Publisher.

Anon. (2011a). *Zouxiang chenggong – Shanghaishi qusian gaokaoqian zhiliang choucha shijuan jingbian: Yuwen* [Walking towards success – Compilation of pre-senior secondary exam quality check exam papers from Shanghai districts: Chinese]. Shanghai: East West Bookshop Publishers.

Anon. (2011b). *Zouxiang chenggong – Shanghaishi qusian gaokaoqian zhiliang choucha shijuan jingbian: Yingyu* [Walking towards success – Compilation of pre-senior secondary exam quality check exam papers from Shanghai districts: English]. Shanghai: East West Bookshop Publishers.

Anon. (2011c). *Zouxiang chenggong – Shanghaishi qusian gaokaoqian zhiliang choucha shijuan jingbian: Shuxue (wenke)* [Walking towards success – Compilation of pre-senior secondary exam quality check exam papers from Shanghai districts: Mathematics (humanities)]. Shanghai: East West Bookshop Publishers.

Anon. (2011d, January 12). *Jingxuan, youhua, tigao* [Careful selection, optimisation, improvement]. *Jinri Chuneng*, p. 3.

[3] OECD claims in a report on Shanghai that 'multiple-choice questions have disappeared from the city's public examinations' (OECD, 2011, p. 92). But this is not the case based on our content analysis of recent junior and secondary exam papers. In fact, multiple-choice questions are still featured in the exam papers for subjects such as English, mathematics, physics and chemistry. What is evident, however, is an increased emphasis on complex and higher-order thinking as well as application to real-world situations.

Liu, Y., & Chen, Z. (2011). Beike huanjie de wenti yu tupo [Problem and breakthrough in lesson preparation link]. In Q. Tang, (Ed.), *Wenti yu tupo: jiyu jiaoyanzhu sanweiyiti jizhi de gaozhong jiaoxue huanjie zhengduixing yanjiu* [Problem and breakthrough: Focused research on senior secondary teaching link based on three-in-one mechanism for the teaching research group] (pp. 65–104). Shanghai: Shanghai University of Finance and Economics Press.

OECD [Organisation for Economic Co-operation and Development]. (2011). *Lessons from PISA for the United States. Strong performers and successful reformers in education*. http://dx.doi.org/10.1787/9789264096660-en. Accessed 12 Jan 2012.

Stigler, W. J., & Hiebert, J. (1999). *The teaching gap: Best ideas from the world's teachers for improving education in the classroom*. New York: Free Press.

Su, J. (2010, December 19). Shanghai 2009 *nian guoji xueshen pinggu xiangmu (PISA) jieguo jiedu* [Interpreting Shanghai 2009 PISA results]. Wenhuibao. http://sq.k12.com.cn/discuz/viewthread.php?tid=555386 Accessed 14 Jan 2012.

Sun, H. (Ed.) (2010). *Wunian zhongkao shiti toushi (2006–2010): Shuxue (Shanghai juan)* [Perspectives on junior secondary exam for 5 years (2006–2010): Mathematics (Shanghai paper)]. Shanghai: Shanghai Science and Technology Education Publisher.

Wu, Y. (Ed.) (2010a). *Wunian zhongkao shiti toushi (2006–2010): Yinyu (Shanghai juan)* [Perspectives on junior secondary exam for 5 years (2006–2010): English (Shanghai paper)]. Shanghai: Shanghai Science and Technology Education Publisher.

Zhang, H., Zhou, J., & Han, W. (Eds.) (2010). *Wunian zhongkao shiti toushi (2006–2010): Wuli (Shanghai juan)* [Perspectives on junior secondary exam for 5 years (2006–2010): Physics (Shanghai paper)]. Shanghai: Shanghai Science and Technology Education Publisher.

Chapter 12
Taking Teacher Professional Development Seriously

Photo 12.1 The school poster reads 'Compete based on aspiration and not extravagance, on diligence and not intelligence, on improvement and not foundation' [bubi kuoqi bizhiqi, bubi congming biqinfen, bubi jichu bijinbu]

Aspiration, Diligence, Improvement

This ideological poster displayed in a Shanghai school aptly sums up the traits I see in many Shanghai teachers: aspiration, diligence, improvement. Ambitious and hardworking, many Shanghai teachers are keen to improve and upgrade their skills

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*, Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_12, © Springer Science+Business Media Dordrecht 2013

and knowledge. Their positive spirit towards self-improvement is encouraged and supported by the municipal, district and school authorities. Teacher professional development is a fairly recent phenomenon in Shanghai. The advent of the teacher professional development initiative can be divided into three phases: the beginning period in 1980s, the exploratory period from 1990 to 1998, and the present period from 1999 onwards (Zhao, 2009).[1] This chapter examines the policy for teacher professional development in Shanghai at two levels: the municipal and the district.

As different teacher professional development plans are targeted at teachers of different grades, it is helpful, at the outset of this chapter, to briefly outline 4 main hierarchical titles for teachers in Shanghai, as follows:

1. Third-grade teachers. They are beginning teachers in their first 3 years of service.
2. Second-grade teachers. They are intermediate teachers who are promoted from third-grade after 3–5 years of service. They need to undergo internal evaluation in the school.
3. First-grade teachers. They are advanced teachers who are promoted from second-grade after at least 5 years of service. They need to undergo internal evaluation in the school and external evaluation at the district level.
4. Senior-grade teachers. They are teachers who are promoted from first-grade after at least 5 years of service. They need to undergo internal evaluation in the school and external evaluation at the district level.

Besides the above official titles, there are two main honorary titles given to excellent teachers: Backbone teacher [gugan jiaoshi] and Special-grade teacher [teji jiaoshi]. Backbone teachers are experienced teachers who have obtained at least a second grade. They comprise about 30% of the teaching workforce and are usually above 30 years old. Special-grade teachers are teachers who have achieved the rare honour of being outstanding in their teaching and leadership. They have usually taught for many years and have distinguished themselves in pioneering new and successful practices that are acknowledged by the authorities and teaching community.

Teacher Professional Development at the Municipal Level

The Shanghai Municipal Education Commission announces its teacher professional development plan every 5 years. The previous plan, which was completed in 2010, was the ‘Eleventh Five’ synopsis plan for the construction of a teaching force for basic

[1] Teacher professional development started in 1980s due to a need to raise the academic and professional qualifications of close to 60% of the 63,000 teachers at that time. The goal of the exploratory phase was simply to raise the teachers’ standards in general, whereas the goal of the current phase is to prepare teachers for the twenty-first century. In 2005, almost all teachers met the academic and professional qualification requirements for teaching: 99.6% for primary school teachers, 99.6% for junior secondary teachers and 98% for senior secondary teachers (Shanghai Municipal Education Commission, 2007b).

education in Shanghai (the 'five' here refers to 5 years, in this case the years 2006–2010) (Shanghai Municipal Education Commission, 2007b). The current plan, the '"Twelfth Five" action plan for the construction of a teaching force for basic education in Shanghai', is a continuation of the previous plan and takes effect from 2011 to 2015 (Shanghai Municipal Education Commission, 2011c). Both plans share the ideology of equipping Shanghai teachers for quality-oriented education under the current curriculum reform. The '"Eleventh Five" synopsis plan for the construction of a teaching force for basic education in Shanghai' states that the overall target for the construction of the teaching force for Shanghai education is as follows:

> To actively carry out excellent teacher education by comprehensively promoting innovative teacher education, constructing an open and lively system for the teachers' education and lifelong learning; working hard to establish a high quality teaching force that has high professionalism, based on a reasonable structure, for balanced development, adaptable to the demands of quality education and curriculum teaching reform, appropriate for Shanghai's development as an international metropolis and meeting the demands of modern education. (Shanghai Municipal Education Commission, 2007c, p. 4)

Likewise, the '"Twelfth Five" action plan for the construction of a teaching force for basic education in Shanghai' states that the overall target is 'to deepen the reform of management system, optimise the teacher training mechanism, construct a teacher training system that has many channels and is open, establishing a modern teaching force that has high professionalism, is competent, is based on a reasonable structure, energetic, highly qualified and professional' (Shanghai Municipal Education Commission, 2011c).

We can see in both plans that the overarching goal to train and empower teachers for the 21st century is aligned with the current curriculum goal of quality-oriented education. The vision, as a school principal put it to me, is for teachers to become 'research-type teachers'. A vice-principal added that the training programmes are designed to 'change the focus from the traditional emphasis on "teaching" for a "teacher" to promoting students' autonomous learning'. It is still too early to assess the specific plans and outcomes of the 'Twelfth Five' action plan for the construction of the teaching force for basic education in Shanghai since it will only be completed in 2015. This chapter shall therefore focus on the 'Eleventh Five' synopsis plan and discuss how Shanghai schools have responded to the plan by implementing school-based teacher professional development. The '"Eleventh Five" synopsis plan for the construction of the teaching force for basic education in Shanghai' has 4 concrete targets and tasks: rising the teachers' academic qualifications, improving the teacher training model, promoting school-based training, and nurturing excellent educators (Shanghai Municipal Education Commission, 2007c, pp. 4–5).

Raising the Teachers' Academic Qualifications

First, the plan aims to build a teaching force that is adaptable to the modern times. This means continuing to raise teachers' professional standards and teaching ability. This includes raising the teachers' academic qualifications, in particular, for kindergarten,

primary and secondary teachers to at least a university degree at the bachelor's level. A teacher who has taught for 30 years observed:

> In the past, teachers joined teaching with just a vocational qualification [zhuanke]. Now teachers' qualifications have continuously been raised. For example, teachers now need to have at least a bachelor's degree to teach in a junior secondary school. So teachers without a degree will undergo continuous education. This applies to primary schools too. There're also more teachers with postgraduate degrees.

In 2010, the percentage of teachers with at least a university degree in kindergarten, primary and secondary schools was 71.7%, which is an increase of 19.7% compared to 2005 (Shanghai Municipal Commission, 2011c). Raising the teachers' academic qualification also includes sending promising school leaders overseas. For example, several cohorts of Shanghai principals, heads of departments and education officers have completed a full-time Master of Educational Administration degree at the National Institute of Education in Singapore since 2008. Teacher upgrading also includes professional courses. For example, at least 95% of all Shanghai teachers have obtained qualifying certificates and others, advanced certificates for designing Information technology curriculum since 1996 (Zhao, 2009, p. 43).

Improving the Teacher Training Model

The second target is to construct a new teacher education system that is adaptable to the demands of quality-oriented education. This includes reforming the teacher training model and encouraging collaborative training among the universities, teacher training institutions, relevant educational organisations and the schools. A key initiative launched by the Shanghai Municipal Education Commission is the '240, 540' education plan. This plan stipulates that all teachers except senior-grade teachers need to fulfil 240 h of training over 5 years; for senior-grade teachers, the requirement is 540 h. As this is a policy regulation from the municipal educational authorities, it has been strictly enforced and is strategically linked to the teachers' continual employment, increase in salary and promotion prospects. This shows the seriousness with which the Shanghai authorities treat teacher training.[2]

Different organisational bodies offer a variety of courses. For example, the Double Famous Project [shuangming gongcheng] (I shall elaborate on this later) is run at the municipal level, the 'form teacher' [banzhuren] and 'backbone teacher' [gugan jiaoshi] training at the district level and the training of new teachers at the school level. Collaborative training is encouraged through inviting experts from the university,

[2] This does not mean that all teachers are positive about these mandated hours of training. Paine and Fang (2006) claim that 'we found teachers rather dismissive of the 240 h of training requirement and in some cases chafing under its restrictiveness' (pp. 283–284). The response of the teachers depends, among other factors on the effective implementation of these requirements at the ground level, which varies from school to school.

educational experts from the district and senior-grade teachers from various schools to train the teachers in a school or district. More examples of the implementation of '240, 540' educational plan and collaborative training will be given later.

The good news is that a fair amount of flexibility has been given to the teachers in terms of choosing the type, timing and level of participation of training they are to undergo. A teacher explains to me:

> You can choose to be trained in different ways. For example you can take part in training from outside the school, or read on your own and write. There're also many opportunities for training, from the national to district level, and conducted by various offices. These opportunities allow teachers to be trained quickly. The authorities also expect teachers, based on their strengths, to attain certain standards after 2 or 3 years. So there're external expectation of and inner motivation for the teachers.

Promoting School-Based Training

The third target of the synopsis plan is to comprehensively establish and promote a teachers' learning culture through professional and autonomous development. This is achieved by raising the quality and effectiveness of school-based training. At least half of the training hours from the '240, 540' educational plan is school-based. This means that schools are given the autonomy to design their own school-based training and collaborate with various agencies. I shall return to this topic in Chap. 18.

Nurturing Excellent Educators

The final target is to establish and promote the management system and mechanism for the professional development of teachers and principals. This includes nurturing more excellent principals and teachers and for every school to have more senior-grade teachers which is the highest work title for teachers in Shanghai. Currently the percentage of senior-grade teachers among all teachers is 11.4% at the junior secondary level and 29.4% at the senior secondary level, which is an increase of 5.4% and 6.7%, respectively, compared to the period before 2006 (Shanghai Municipal Commission, 2011c). The long-term goal is for Shanghai to nurture a group of principals and teachers who are renowned not only in China but also internationally.

A project offered by the Shanghai Municipal Education Commission is the 'Famous Teachers, Famous Principal Project' [mingshi mingxiaozhang gongcheng] or 'Double Famous Project' [shuangming gongcheng] for short. The goal is to groom highly enterprising principals with strong management skills to become model principals who enjoy a nationwide reputation, as well as to groom highly promising teachers to become municipal key teachers, research leaders, master teachers and internationally renowned scholars and educational experts (Shen, 2007). The current phase, which focuses on promoting school-based training, has been launched under the 'Twelfth Five' action plan. Led by a team of Shanghai's established

principals and teachers, the training includes forums on various educational topics, teaching demonstration and overseas school visits.

The Shanghai Municipal Education Commission has also collaborated with various district education bureaus to organise 'Expert Style Teacher Mentoring Training' [zhuanjiaxing jiaoshi daijiao peixun]. Over 300 'Famous Teacher's Studio' [mingshi gongzuoshi] at the municipality and district levels have been set up. Schools will recommend suitable teachers to be mentored by the studio tutors in groups of about 10. Lasting at least 1 year, the mentoring involves the mentee learning from the studio tutors in areas such as lesson observation and research on educational topics (Zhao, 2009, p. 21).

One innovative initiative to improve teaching is the '862' curriculum reform project. Led by the Shanghai Municipal Education Commission and involving the education institutes of various districts, the commission produced recordings of 862 classroom lessons. These lessons, which are not necessarily model lessons, are actual classroom lessons conducted by primary and secondary teachers from various districts. They have since been uploaded onto the teachers' web portal as well as made available in CD format and distributed to all schools.

According to a senior educator who spearheaded the project, schools utilise these lesson demonstrations by organising sessions in which subject teachers view a lesson together and discuss it (Zhang, 2008a, pp. 390–293). The teachers will then grade the lesson and give their comments online through the staff portal. Some schools also expect every teacher to submit at least 6 lesson critiques as well as participating in at least 6 rounds of subject-research groups' lesson critique activities. Some special-grade teachers and principals have also been invited to give talks commenting on the 862 lessons. This initiative allows teachers to have a realistic sense of classroom teaching and enables them to improve on their own teaching through personal reflection, learning from the experts and teacher collaboration.

Photo 12.2 A group of teachers learning together

Teacher Professional Development at the District Level

It is instructive to give an example of teacher professional development in a district to illustrate its implementation in Shanghai (the information is taken from Huang, 2010). Under this plan, the 240 h of compulsory training are converted into credits, with 10 learning hours being equivalent to 1 credit. In compliance with the policy regulations from the Shanghai Municipal Education Commission, all teachers except senior-grade teachers have to complete 24 credits over 5 years while senior-grade teachers have to complete an additional 30 credits through special topic research. The table below presents the district's training plan (Table 12.1).

Training courses under categories A and B are compulsory while the rest are elective courses. Such an arrangement ensures that all the teachers participate in the core training courses as laid out by the district yet they are given the autonomy to select courses that are more relevant and beneficial for them.

The district has further categorised training for teachers into 3 main types: foundational training (A + B + C1), development training (C2 + D) and research training (E). Foundational training consists of school-based training, interschool training, and training on academic subjects and modern educational techniques by the teaching-research office of the teacher training college. Development training and research training are primarily training organised by the district's teacher training college in collaboration with universities and other organisations. For example, the district organised a 1-year course where teachers attended lectures by professors from the philosophy and Chinese departments of Fudan University. Another example is the 'Shen Liming studio' that is part of the 'Famous Teacher's studio'. Named after a Shanghai special-grade teacher and former principal of a school in the district where the school belongs to, this course offers training such as school administrative management, classroom teaching research and lesson observations.

Schools in the district are given the autonomy to design and implement school-based training under category C1. There are 4 types of school-based training: curriculum training, special topics on teaching, teaching-research training, and forums on special topics. Teachers (generally senior-grade teachers) who wish to offer a school-based training course need to apply formally and receive approval from the district teacher training college. Every school needs to appoint a teacher training officer who oversees and inspects the school teachers' training and gives feedback to the teachers.

Besides training for the teachers, the district has also introduced other initiatives to promote teacher professional development. 2 examples are given here, the first being a classroom research project based on the topic of a 'good lesson'. The research project follows a cycle that comprises 6 steps: identify a problem, formulate a topic, discuss, practise and reflect, conclude and refine, and teach. To launch the research topic, the district established a research leading group, established various subject professional committees led by special-grade teachers [teji jiaoshi] and leading subject teachers [xueke daitou jiaoshi] to carry out research on what constitutes a good lesson in the subject. To ensure support for the research topic in all

Table 12.1 5-year teacher professional development in a district

<table>
<tr><td colspan="2">Training subject</td><td colspan="5">Training item and credit</td></tr>
<tr><td colspan="2"></td><td>Curriculum reform special item training: 10 credits</td><td>Special topic training on ‘curriculum integration and resource application’: 2 credits</td><td>Specific training (credits to be allocated based on individual arrangements): 10 credits</td><td>Teacher forums on social sciences and arts: 2 credits</td><td>Special topic research: 30 credits</td></tr>
<tr><td colspan="2"></td><td>A</td><td>B</td><td>C1</td><td>D</td><td>E</td></tr>
<tr><td colspan="2">First-grade teachers and others below this grade in secondary schools
Senior-grade teachers and those below this grade in kindergartens and primary schools</td><td rowspan="3">Training for all staff, organised by the district teaching-research office: 2 credits every year</td><td rowspan="3">Training for all staff, organised by the district IT technology centre: 2 credits</td><td>Interschool training: 2 credits every year</td><td>Free to attend various forums organised by the district within 5 years: 5 credits</td><td rowspan="3">Only for senior-grade teachers in secondary school: to complete based on regulations</td></tr>
<tr><td>First-grade backbone [gugan] teachers in secondary school</td><td>Senior-grade backbone [gugan] teachers in kindergartens and primary schools</td><td>C2
Training once every 2 years, organised by district teacher training college: 10 credits</td><td>Free to attend various forums organised by the district within 5 years: 9 credits</td></tr>
<tr><td colspan="2">Senior-grade teachers in secondary school</td></tr>
</table>

Source: Huang (2010, p. 25)

schools in the district, the district required that each school's teaching-research group leader launched a school-based 'good lesson' research project, based on the findings and work plan recommended by the subject professional committee. This means that every subject teacher in each school has the duty and responsibility to participate in the school teaching-research group's research topic of a 'good lesson'.

The second example is the 'Thursday award' [xinqisi jiang] initiative, organised by the district to appraise and reward teachers who excel in teacher professional development. Teachers are divided into 4 categories: 'trainee period' (teachers with less than 1 year of teaching experience; award to be given once a year), 'growth period' (teachers who have 3–5 years of experience; award to be given once every 2 years), 'development period' (teachers who have 5–8 years of experience; award to be given once every 2 years) and 'achievement period' (teachers who have more than 8 years of experience; award to be given once every 3 years).

Conclusion

This chapter highlighted the heavy investment by the Shanghai authorities and schools in teacher professional development at various levels to ensure a high-quality teaching force. Two strikingly Chinese characteristics can be observed in the Shanghai authorities' approach towards teacher professional development. First is its systematic and hierarchical approach to policymaking and implementation. A 3-level management system is adopted where the central power (Shanghai Municipal Education Commission) takes the lead in setting the overall policy direction and formulating policy targets. Next, the district education bureaus come up with concrete measures for schools to implement in their respective districts. Finally, each school designs and implements customised school-based training for their teachers (I will elaborate on this in Chap. 18). In the words of a school principal: 'The lower level is led and guided by the higher level, and every level needs to fulfill the in-service teachers' educational item assigned to it' (Zhao, 2009, p. 47). This is the dynamics of levels of simultaneity arising from decentralised centralism, as discussed in the previous chapters (see Chaps. 8, 9 and 10).

Secondly, the teacher professional development plan is presented and assessed using predominantly quantitative measurements. Clear indicators for various types of training, specific achievement targets and the number of credits awarded for each activity are spelt out. Such an approach has the advantage of ensuring that the teachers have no doubt about the expectations of the higher authorities and take responsibility for their own achievements by working towards their own goals. As a vice-principal put it, 'teachers who fail to complete their credits will jeopardise their chance of getting a pay rise and promotion in grade' (Huang, 2010, p. 26). What we see therefore is the phenomenon of decentralisation taking place in the midst of continued central power, enforced through central legislation, regulations and a reward and punishment system.

The design and implementation of the teacher professional development at the municipal and district levels almost guarantee that Shanghai teachers will take teacher professional development seriously. To return to the ideological poster mentioned at the start of this chapter, 3 words aptly describe many Shanghai teachers in their professional development: aspiration, diligence, improvement.

References

Huang, Q. (2010). *Quyu tuijing jiaoshi zhuanye fazhan de shijian yu yanjiu: yi Shanghaishi zahbeiqu weili* [Practice and research of teacher professional development promoted by the district: Using Shanghai Zhabei district as an example]. Unpublished Master's dissertation, National Institute of Education, Nanyang Technological University.

Paine, W. L., & Fang, Y. (2006). Reform as hybrid model of teaching and teacher development in China. *International Journal of Educational Research, 45*(4–5), 279–289.

Shanghai Municipal Education Commission. (2007b). *Shanghaishi zhongxiaoxue ketang jiaoxue youxiaoxing qingkuang baogao* [Analysis report of the effective situation of Shanghai secondary and primary school classroom teaching]. http://xbyx.cersp.com/xxzy/ztlw/200710/1961.html. Accessed 3 Mar 2012.

Shanghai Municipal Education Commission. (2007c). *Shanghaishi jiaoyu weiyuanhui guanyu yingfa 'Shanghaishi jichu jiaoyu jiaoshi duiwu jianshe "shiyiwu" guihua gangyao de tongzhi* [Notice by the Shanghai Municipal Education Commission on issuing '"Eleventh Five" Synopsis plan for the construction of teacher force for basic education in Shanghai']. http://www.shmec.gov.cn/attach/xxgk/2772.doc. Accessed 12 Apr 2012.

Shanghai Municipal Education Commission. (2011c). *Shanghaishi jiaoyu weiyuanhui guanyu yingfa 'Shanghaishi jichu jiaoyu jiaoshi duiwu jianshe "shierwu" xingdong jihua de tongzhi* [Notice by the Shanghai Municipal Education Commission on issuing '"Twelfth Five" action plan for the construction of teacher force for basic education in Shanghai']. http://www.shanghai.gov.cn/shanghai/node2314/node2319/node12344/u26ai30442.html. Accessed 12 Apr 2012.

Shen, Y. S. (2006b). *Kecheng pingjia* [Classroom appraisal]. Beijing: Beijing Normal University Press.

Zhang, R. & Li, L. (n.d.). *Xunhuan shizhen' jiaokeyan fangfa (san)* [Post 'tea-house style' teaching (3): 'Empirical cycle' teaching research method]. Unpublished notes.

Zhao, G. (2009). *Bijiao zhongguo shanghai yu xinjiabo de zaizhi jiaoshi jiaoyu* [A comparison of in-service teacher education in Shanghai and Singapore]. Unpublished master's dissertation, National Institute of Education, Nanyang Technological University.

Part III
The Practice

Chapter 13
Towards Innovation and Application: Curriculum Changes in Shanghai Schools

Photo 13.1 A student with a robot built by him and his classmates

I came across this 'robot girl' in a Shanghai school (on the right in the picture above). She's cute, with her pink dress, mischievous eyes and beauty-queen hand wave. But she is not just 'cute'. She's capable of moving her hand to pour Chinese tea for guests! A teacher of the school arranged for a student who was involved in building the robot to demonstrate her prowess to me. So good was she, the teacher told me, that she has won the school a top prize in robotics.

The innovative and rewarding experience of students in this school is not unique. Many schools in Shanghai have launched their school-based curricula to promote the curriculum reform goal of quality-oriented education. This chapter presents an overview of the major changes in Shanghai schools to foster innovative thinking and practical ability in their students.

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_13, © Springer Science+Business Media Dordrecht 2013

School-Based Curriculum

Curriculum

According to the Shanghai Municipal Education Commission (n.d.) in a seminal policy paper, 'Curricular plan for ordinary primary and secondary schools in Shanghai (trial version)', the current curriculum reform focuses on helping students to acquire "an innovative spirit and real-life ability". The goal is holistic development, as evident in the moral, intellectual, physical, aesthetic and social aspects through diverse learning experiences.

As mentioned earlier (Chap. 7), the curriculum reform aims to help Shanghai meet the challenges of a knowledge economy. Against a globalised backdrop, innovation and application refer to the ability to go beyond textbook knowledge to acquire new knowledge and solve problems. By giving students avenues to experience, research and innovate, the spotlight is on student-directed research, practical experience and interaction with others (Shanghai Municipal Education Commission, n.d.). To encourage real-life learning, many schools take their students outside the classroom to visit the science centre, museums, historical sites and other places of interests. Schools now offer a variety of expanded and inquiry/research courses such as robotics, archery, dance and 'philosophy for children' programme. Examples of expanded courses in Shanghai schools are 'Visit the astronomy museum to gaze the stars', 'Chinese opera is really fun', 'Invite a friend to your home' and 'Let me manage a household for a day'.

New inquiry/research courses have also been launched in many schools in partnership with universities such as Fudan University and other higher institutions to facilitate high-level research and collaboration. A principal told me how his school combines innovation and application through a research course:

> Our science group has launched a 'Reform on Life Experiment and Experiment Life' [shenghuohua shiyan, shiyan shenghuohua geige]. Because for sciences, it's not just about knowledge mastery but ability. For example, our students know that China's product quality standard is weak, for example soy sauce, vinegar, milk powder. We got our students to go to the supermarket to buy them, for example to buy a bottle of vinegar, and conduct an experiment in the lab. We'll believe a product's claim if it passes the testing.

In line with the aim to nurture the students holistically, schools are encouraged to identify and develop their niches in various areas such as Information technology, English, arts and sports. A principal explained:

> The emphasis is on the special characteristics of each school, not for every school to only use exam results to assess its achievements. Every school has its own strengths, for example for my school, its strength is citizenship education. For another school, it could be sports, arts, technology.

Photo 13.2 An example of an expanded course is student dance

To support the vision of preparing Shanghai students to engage with the world, the curriculum reform is geared towards enhancing the students' learning of English. By making English compulsory from primary 1 onwards (instead of primary 3 in most parts of China), the goal is to give students 12 years of English learning. This change is motivated by the authorities' awareness that English is essential to helping students access information in a globalised, digital and modern world. The desired outcome is not just written proficiency, but all-rounded proficiency in listening, speaking, reading and writing. Another principal said:

> Our English teachers do not just focus on grammar, we also emphasise language communication. For example, a teacher will change a passage into a story, and let the students tell each other the story. Only after they are familiar with the story, will we focus on the grammar, so this improves the students' results.

In addition, some schools have engaged native speakers of English to teach in their schools, designed their own teaching materials and sent their English language teachers and students to Europe, United States and Australia for short-term training and immersion trips. Creative and engaging teaching methods have also been adopted to make the learning of English fun. A principal said: 'My son is in senior year 2. For English, it's fun, every lesson, there's a topic for debate'.

Pedagogy

Complementing the school-based curriculum is the goal to transform the learning style of students. The Shanghai Municipal Education Commission states that the reform aims to change the current transmission approach where students tend to study for exams and learn passively through didactic teaching. What is advocated is interactive learning that combines student autonomy and cooperative exchange (Shanghai Municipal Education Commission, n.d.).

Teachers I spoke to noted the shift in teaching philosophy and approach under the curriculum reform. 'Compared to past, the teaching has totally changed', said a teacher who has taught for 30 years in a junior secondary school. 'In the past it's teacher talking all the way, the transmission approach', she added, 'Now it's for students to move more, think more, practise more'. Another teacher who has taught for 20 years in a primary school said:

> Teaching has changed a lot over 20 years. In the past the focus was on the teacher, how the teacher prepares the lesson, designs the lesson, how to master the important and difficult points in teaching, and how to teach students well. … But now, especially in recent years, the focus is the students, what kind of learning is required by the students? This requires us to take note of the differences among students, even in the same class.

By giving students more avenues to experience, research and discover, the spotlight is on 'student-directed research, practical experience and interaction with others by encouraging students to actively inquire, experiment, innovate and pursue excellence' (Shanghai Municipal Education Commission, n.d.). I shall give 2 examples of student-centred pedagogies pioneered in some Shanghai schools in the next 2 chapters.

Assessment

Another important curriculum change in Shanghai schools is the mode of assessment. Under the model of decentralised centralism, schools are given the autonomy to introduce their own school-based assessments. The school-based assessments do not replace but complement the high-stakes exams (zhongkao and gaokao) that are still controlled by the central authority.

The objective of school-based assessment is to encourage students to go beyond passive acceptance of what they learn in class to active participation in questioning, reflecting and applying what they have learnt to the real world. To achieve this objective, schools are expected to emphasise not just the students' knowledge and skills but also the processes and methods the students employ in acquiring knowledge and skills, and the accompanying emotions, attitude and values that are formed in the process. The following is an example of a typical lesson plan used in a Shanghai school that covers all three dimensions (Huang & Ji, 2007, p. 113):

An Example of a Lesson Plan on 'Protecting Our Homeland – The Earth'

- *Knowledge and skills:*
  (a) Understand the causes, danger and remedies of environmental pollution.
  (b) Understand at a deeper level the meaning of protecting our homeland.
- *Process and method:*
  (a) Nurture students' learning and thinking abilities through reading the text.
  (b) Experience the preciousness of the earth and beauty of life through analysing the video clip 'The crying and laughing earth'.
- Attitude, emotions and values:
  (a) Excite and encourage students to love the earth and respect life through watching the video clip 'The crying and laughing earth'.
  (b) Excite and encourage students to support water conservation and treasure life through learning about water pollution, and how it has been exacerbated by water shortage.

The emphasis on the students' knowledge and skills, process and method, and attitude, emotions and values is also reflected in the students' worksheets. An example is a physics worksheet designed for senior year 2 students in a Shanghai school I visited. The topic of the worksheet is 'The phenomenon of electromagnetic induction'. The worksheet starts in an interesting way by introducing to students Hans Christian Ørsted, who discovered that electric currents create magnetic fields. Some questions in the worksheet, with my observations in brackets, are:

1. Since electricity can generate magnetic energy, can magnetic energy generate electricity? (encourages students' inferential thinking)
2. Read the textbook, page … on an experiment conducted. Which of the following scenarios will have the magnetic energy generating electricity? (encourages students to draw their own conclusions)
3. Look at the equipment on the table. [Students are shown pictures of equipment.] Which equipment are able to produce magnetic fields? (encourages students to apply what they have learnt and make their own judgements)
4. Read the textbook, page … Discuss with the rest and share what you have learnt about scientific research and the importance of physics. (encourages students to relate what they have learnt to their lives)

The teachers' notes that accompany the worksheet state that 'Scientific research is not based on "luck", there is no short cut. What appears to be coincidence is based on definite principles. Physics provides important meanings to modern social life'.

Another change in curriculum is the shift from summative and written modes of assessment to formative and alternative modes.[1] An example of formative assessment

[1] For a discussion on the relevance and challenges of alternative assessment for an East Asian society using Singapore as a case study, see Koh, Tan and Ng (2012).

is the growth record for every student. The growth record contains information that reflects the student's learning process and outcome, including the student's self-appraisal, best works (result record and other works), records of social practice and social community activities, records of physical fitness and artistic activities, observations and appraisal of teachers and classmates, information from parents, information on exams and tests, etc. (Ministry of Education, 2002).

Schools have also explored using alternative assessment modes. For example, a teacher told me that her school uses what she calls a 'Western assessment model' to assess projects. Instead of the traditional pen-and-paper assessment, the school gets its students to display their projects and evaluate the extent to which the project demonstrates problem-solving ability and flexible application. Other alternative assessment methods suggested by the Shanghai Municipal Education Commission (n.d.) for schools are keeping a record of classroom behaviour, community service and social practice record, dialogue record, learning journal, and recommendation and evaluation by the relevant persons (Shanghai Municipal Education Commission, n.d.).

In tandem with the aim to go beyond knowledge and ability to developing the students' emotion, attitude and values, some schools have devised formative assessment that focuses on the students' moral character. For example, one school has implemented a '"Good student" Basic Quality Appraisal'. What is novel in the Chinese context is that the appraisal involves not just teacher's appraisal (the norm in Chinese schools) but also peer appraisal and even the student's self-appraisal (see Table 13.1):

Conclusion

This chapter highlighted the school-based curricula in Shanghai schools that are aimed at fostering innovative thinking and practical ability in their students. Overall, the curriculum reform signals an ambitious move to go beyond the students' test scores – the perennial focus of Chinese education – to nurturing the students' innovative spirit and real-life ability. Giving the schools the autonomy to design their school-based curricula has resulted in many Shanghai schools developing their own special characteristics, earning them numerous achievements in different domains.

One such school I visited in Shanghai specialises in Chinese Orchestra (see photo below). The student orchestra has won a number of prizes and its standard is really high. I know that because I was given a CD recording of their performance by the school principal: the students play like professional musicians!

Table 13.1 'Good student' basic quality appraisal table

Target/criterion	Self-appraisal (30%)	Small group appraisal (30%)	Teacher's appraisal (40%)
(1) Civilised manner of coming to school • Not late for lesson • Does not wear earrings, does not have dyed hair or long hair for boys • Performs the 3 steps in greeting the teacher, etc.			
(2) Civilised manner of attending lessons • Complete assignments on time, serious in writing • Independent thinking, no plagiarism • Raises hand first before speaking, etc.			
(3) Civilised manner of resting • Waits for the teacher to dismiss the class before leaving one's seat • Does not sit on the table • Does not shout, etc.			
(4) Civilised manner of eating • Queues to enter the canteen • Washes hands before eating • Does not talk loudly during eating, etc.			
(5) Civilised manner of protecting public property • Saves water and electricity • Does not climb windows • Does not step on the grass, etc.			
(6) Civilised manner of exercise • Does not push others, fight or talk • Listens to instructions for actions • Wears attire neatly, etc.			
(7) Civilised etiquette • Speaks graciously and loudly when answering questions • Does not take other's possessions without permission • Often says 'please', 'thank you', 'sorry' and other polite words • Total			

Instruction: The grading is based on 3(good), 2(average) and 1(poor). The small group appraisal is carried by 4 nominated classmates with the class monitor as the group leader. The mark allocation is as follows: top 25% = excellent, next 25% = good, the rest: a pass grade if the total score is above 90 marks.

Photo 13.3 Student Chinese Orchestra of a school

References

Huang, M., & Ji, C. (2007). *Zhuti yanjiushi jiaoxue* [Subject research style teaching]. Shanghai: Baijia.

Koh, K., Tan, C., & Ng, P. T. (2012). Creating thinking schools through authentic assessment: The case in Singapore. *Educational Assessment, Evaluation and Accountability, 24*(2), 135–149.

Ministry of Education. (2002). *Jiaoyupo guanyu jiji tuijing zhongxiaoxue pingjia yu kaoshi zhidu gaige de tongzhi* [Notice by the Ministry of Education on actively advancing the appraisal and exam system reform of secondary and primary schools]. http://www.jincao.com/fa/03/law03.s21.htm. Accessed 12 Mar 2012.

Shanghai Municipal Education Commission (n.d.). *Shanghaishi putong zhongxiaoxue kecheng fangan* [Curriculum plan for ordinary secondary and primary schools in Shanghai]. http://www.fc2z.fx.edu.sh.cn/xxgk/3/4/2/342007.doc. Accessed 2 Mar 2012.

Chapter 14
From Teacher Talk to Student Talk: Dialogue-Style Teaching

I was what many Chinese would consider a model student. I was a *very* quiet in class. Not because I didn't want to (okay, sometimes I kept quiet because I was bored or unprepared for lesson), but because I was brought up to believe that being quiet was *the* behaviour.

Reticence is a virtue in the Chinese culture. In the classic text, *Analects*, a moral person is described as, among other things, a person cautious with his or her words. As a child, I was told to be obedient and not to ask too many questions, especially for a girl. 'Children should not interject when adults are talking!' [daren jianghua, xiaohaizi buyao chazui] is a common admonishment given by Chinese parents to their children. Being talkative will get you nowhere but would most likely earn you a scolding from your teacher or parent. That the dominant assessment mode in Chinese societies for thousands of years has been pen-and-paper exams rather than performative tasks such as oral assessment reinforces the sociocultural perception that one does not need to articulate one's views to be academically successful. Such conditioning arising from the cultural scripts may explain why many East Asian students, even when they study at overseas universities in Anglophone countries, are relatively quiet and passive in class.[1]

But step into any classroom in Shanghai today, and you'll see a different picture. You will find students contributing to small group discussions, speaking up in class and participating in debates. The first part of this chapter discusses how the focus in teaching has changed from teacher talk to student talk, while the second part focuses on a particular initiative by a school to promote 'dialogue-style' teaching and learning.

[1]For research on overseas Chinese' struggles in class participation, see Durkin (2008). Also see Chap. 15 and Chap. 16 on how the Chinese culture affects the Shanghai students' behaviour in class participation.

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_14, © Springer Science+Business Media Dordrecht 2013

From Teacher Talk to Student Talk

'In Shanghai today, very few lessons have remained traditional, the boring and "forcing you to learn" type', a vice-principal told me. 'Group work for students, working in pairs or in fours, having conversations; these are common now', a principal added. In other words, there has been a major shift in teaching and learning styles in Shanghai. This is one of the goals of the current curriculum reform, to 'develop every student' by promoting students' innovative thinking and practical ability (see Chap. 7 on curriculum reform). The assumption here is that it is difficult for students to be innovative and apply what they have learnt if they remain quiet and passive in class.

The shift from teacher talk to student talk stems from the Shanghai authorities' dissatisfaction with the traditional transmission teaching method. A school principal told me that he was shocked some years ago when a student in his school told him that he had not spoken up in class for the past 6 months! A teacher I interviewed explained to me the traditional didactic method:

> It's the teacher talking from start to end. The students do not speak up at all, not even one word. The student has no space to speak up, no right, no opportunity, no possibility. This method has a long history and practical use in China. … Traditional teaching is transmission, it's great but it's not about the individual, it's about ideology, politics, it's given by others, it's not through your own thinking, and does not nurture innovative awareness.

The Shanghai Municipal Education Committee (n.d.) critiques traditional learning styles as overemphasising knowledge at the expense of ability, overemphasising outcome at the expense of process, overemphasising differentiation at the expense of development and value inclination, and neglecting humans' subjectivity, initiative and cooperation.

A teacher shares with me an underlying reason for Chinese teachers to rely on the transmission approach: 'Teachers tend to think that they need to talk more because the students' starting point is zero, the students know nothing so they have to depend on the teacher to teach them the difficult points, the important points, the concepts and formulas, before they can practise.' This assumption of teachers stemmed largely from the study of classics for the imperial exams in ancient China. Many students in ancient times knew little about these classical works so the teacher's role was to transmit their knowledge to the students using didactic methods. But given that the exam format and content have changed in Shanghai (see Chap. 11 for details of the exams), the effectiveness of the transmission teaching approach is now put in question. What is advocated now in Shanghai schools is a 'complete learning style', described as follows:

> A complete learning style requires a change from the unilateral receiving learning style towards advocating experience and exploration, and discovering inter-connected learning. Let realistic, interesting and exploratory learning activities become the main method for learning. … Focus on the 3 aspects of comprehensive development: students' knowledge and ability, the process and method, emotional attitudes and values, and not just on developing their knowledge or ability. (Shanghai Municipal Education Commission n.d.)

Under the current curriculum reform, student talk is being advocated in many Shanghai schools across subjects and through different activities. For example, a vice-principal shared with me how students in his school debated on ways to alleviate the problem of traffic jams in the city. A school principal gave another example:

> I observed a History lesson in my school. At the start of every lesson, a student will give a speech. Students will take turns to speak for five minutes each time, to talk about a historical event. After that, the other students will give their views, critique it. This will be part of the marks for the students' daily learning scores. So this is common.

Consistent with encouraging student talk is the focus on the 3 aspects of comprehensive development, as mentioned in the previous chapter: students' knowledge and ability, process and method, and attitude, emotions and values. This marks a change from lessons in the past where the focus was primarily on students' knowledge and ability. It is worthy to note that some schools go beyond introducing ad hoc activities that encourage student talk to nurturing a school-wide culture that centres on dialogue. The next section highlights one such school.

A Case Study of 'Dialogue-Style School Culture'

The whole-school approach to promoting dialogue was initiated by a senior secondary school in Shanghai. 'We wanted a change in the teaching method of "talking all the way" [mantangguan]', said the school principal. He added humorously: 'In China,

Photo 14.1 The banners in a school read 'Teacher to talk less and listen more, students to diligently discuss and ask questions' [laoshi shaojiang duoting, xuesheng qinyi shanwen]

we call it "force-feeding the duck" [tianyashi], it's like the Beijing duck, you need to first stuff the food into it'.

Rejecting excessive teacher talk, the school proposed what it calls 'Constructing a dialogue-style school culture' [duihuaxing xuexiao wenhua jianshe] in 2005. It was recognised by the Shanghai Municipal Education Commission as a research initiative for implementation. The aim, according to the principal, is to develop an open culture of dialogue among the staff and students by infusing the school curriculum with a scientific spirit of inquiry that pursues excellence, harmonious living and cooperation. This is achieved through various types of dialogue held in a democratic and equal environment. Elaborating on the notion of 'democratic and equal environment', the principal said:

> Dialogue, in our view, is understood as an absence of authority. In our school, teachers and students are equal. Equal based on the law of knowledge; in the classroom, we're all learning knowledge. Equal based on the law of researcher; the teacher is not an absolute authority, but is just someone who has learned it in advance, or has learned more. We recognised that the students have talent too.

The school has identified 4 main types of dialogue:

- *Teacher-student dialogue*
  Teachers need to infuse a spirit of dialogue into the teaching process. This is achieved by removing the teacher's exclusive speaking right and nurturing the students' democratic and creative awareness, in order for teachers to grow and become the students' growth helper.
- *Students-text dialogue*
  Students need to have dialogue with their texts' authors for them to understand and analyse the text, guided by multidimensional perspectives.
- *Student-student dialogue*
  Students need to cooperate and develop their own sources of inspiration, for them to learn self-expression, communication skills and competition-cooperation abilities.
- *Students' self-dialogue*
  Students need to reflect on the process of learning. This is achieved by extending dialogue beyond the classroom for students to mull over issues, recall lessons and learn more about the real world.

The school has introduced several measures to nurture a school culture of dialogue. First, the school has revised the teaching appraisal method for teachers to focus on the students' learning situation. A 'good lesson' is now defined as one in which the students have learnt well based on the processes of mutual listening and learning, where teachers actively engage in dialogue with the students. The teaching appraisal is based on questions such as the following:

- Has the teacher seriously listened to the students before he or she plans the lesson to draw out the students' thinking and sharing?

- Does the lesson include opportunities for mutual listening by the students and teacher?
- Is the teacher sensitive to and concerned with the students' learning conditions?
- Does the teacher seize the opportunity to let the students interact with the text so that they obtain fresh insights?
- Does the teacher wholeheartedly value the students' problems and doubts and help the students to resolve them?

The above teaching appraisal is contrasted with, and a major departure from, the traditional classroom teaching appraisal standard. The latter typically contains 4 components: teaching objective, teaching process, teaching quality, and teaching outcome (see Table 14.1 below).

We can see from the form below which is taken from a district in Shanghai that the focus is on the teacher and teaching rather than the students. The 'teaching cycle' mentioned under the teaching process refers to the 5 sequential steps in lesson delivery: introduce the topic by presenting a scenario, get students to learn new knowledge, consolidate their learning through practice, get students to summarise the lessons learnt, and set homework to help consolidate their knowledge. The spotlight of the teaching cycle is on the knowledge the students should acquire. Although the appraisal form mentions the need for teaching to meet the individual needs of student and for the teacher to use a range of activities, the emphasis is on the teacher delivering the textbook content through the 'important points' and 'difficult points'. This is because the traditional classroom teaching appraisal in

Table 14.1 Traditional classroom teaching appraisal form

Appraisal indicator	Standards for excellence
Teaching objective	The objective is clear, appropriate, correct and with sufficient depth; it provides the opportunity to be linked to political ideological and moral education
Teaching process	The teaching cycle is tight; the teaching is balanced and well paced, focuses on the key points, highlights the important points and overcomes the difficult points. The teaching structure, method and strategy meet the needs of the content, the subject's special characteristics and the students' practical situation. The teaching meets the individual needs of students and focuses on all the students through inspiration and guidance
Teaching quality	The teaching is systematic with strong control and flexibility. The teacher is approachable and natural, uses accurate and lively language, speaks Mandarin (Putonghua), has a mature way of speaking and acting, writes clearly on the blackboard and delivers a design that is standardised and reasonable
Teaching outcome	The teacher completes the tasks in a timely manner, achieves the dual foundation of knowledge and skills. The teacher nurtures ability, obtains the students' full attention and uses active thinking and a range of activities with high level of accuracy

Source: Education Bureau of Yangpu District (2008)

Shanghai/China is premised on the 3 centres of teacher-centredness, classroom-centredness and text-centredness.

The new emphasis on dialogue-style teaching in the Shanghai school mentioned in this chapter has led to changes in the classroom. A teacher wrote an essay to explain how she advocated dialogue-style teaching and learning through 'teaching plan guided learning' (Liu, 2009). She observed that the new form of learning has transformed the traditional didactic style of 'making me learn' into one where students take the initiative and say 'I want to learn'. According to her, students first read the teaching materials and complete the 'self-learning test' on their own, 1–2 days before the lesson. On the day of the lesson, the teacher guides the students in discussing and sharing their ideas with one another. Next comes 'thinking training', where the teacher corrects the students' inadequacies and encourages the students to raise their own views, questions and problem-solving methods. The lesson ends with the students revising the knowledge points they have learnt. A survey of the students, conducted by the teacher, shows that 82.4% of her students are more interested in learning as a result of this initiative (Liu, 2009, p. 79).

The second measure introduced by the school to nurture a culture of dialogue is for every teacher to plan his or her own 'classroom teaching improvement plan'. The teachers are given a 'Classroom teaching improvement handbook' which guides them in analysing their own teaching and identifying their weaknesses and improvement goals. Regular forums for teachers and public lessons are conducted to encourage resource sharing. Teachers also work with their teaching-research groups to plan lessons, observe and critique one another's lessons, conduct research and exchange ideas (for more information on teaching-research groups, see Chap. 17).

Thirdly, the school has launched a number of special courses for the students. The principal explained:

> The course is really a 'life dialogue' to nurture the students' interest, develop their ability and meet social needs. For example, we get our students to manufacture their own soap, and even perfumed soap. The teachers use teaching materials provided by East China Normal University. A Physics teacher even helped his students build a simple air-conditioner. This course is also about values and ideology, about environmental awareness ability, encouraging students to be concerned with, and integrated into society.

Conclusion

This chapter explored how Shanghai schools have increasingly shifted away from the traditional transmission style of teaching to active student participation through various types of dialogue. The shift from teacher talk to student talk through a dialogue-style approach challenges the whole-class instructional model in China. Fang and Gopinathan (2009) observe that the whole-class instruction method common in East Asian classrooms is contrasted with the group work-based instruction method common in Western/Anglophone classrooms, where classroom activities are student-centred and teachers act as facilitators. It will be interesting to

see how the development towards student talk in Shanghai and subsequently other parts of China/East Asia will blur the dichotomy between Eastern and Western modes of teaching.

In a survey on the extent of success for the shift from teacher talk to student talk, the Shanghai Municipal Education Commission (2007a, b) reports that over half of the teachers (55%) advocate autonomy, cooperation and inquiry-based learning in the ordinary course of the teaching process. There is evidence that lessons based on 'chalk and talk' teaching has gradually been replaced by more student-based teaching with teachers using more varied teaching methods. For the teachers, the shift towards student talk has implications not just for classroom teaching, but what happens before the lesson in the lesson preparation, and after the lesson in the setting and marking of assignments. The next chapter explains how another pedagogical movement introduces changes to not just teaching but other aspects of a teacher's work such as lesson preparation and teacher research.

In the midst of the changes that are taking place in Shanghai, one thing is for sure: a quiet and passive student like me in my student days will no longer be considered a model student.

References

Durkin, K. (2008). The adaptation of East Asian masters students to western norms of critical thinking and argumentation in the UK. *Intercultural Education, 19*(1), 15–27.

Education Bureau of Yangpu District. (2008). *Ketang jiaoxue pingjia jilubiao* [Traditional classroom teaching appraisal record]. http://www.tjec.edu.sh.cn/xxgk/Article/View.aspx?id=113. Accessed 2 Apr 2012.

Fang, Y., & Gopinathan, S. (2009). Teaching in schools in eastern and western contexts. In L. J. Saha & A. G. Dworkin (Eds.), *The new international handbook for teachers and teaching* (pp. 557–572). New York: Springer.

Liu, N. (2009, October). Tigao ketang zhishi rongliang he siwei rongliang – qiantan xuean yingyong [Raising the capacity for classroom teaching and thinking – Discussing application of learning plan]. *Kegai tanjiu*, 78–79.

Shanghai Municipal Education Commission. (2007a). *Shanghaishi zhongxiaoxue kecheng yu jiaoxue gaige xianzhuang diaocha baogao* [Survey report of Shanghai secondary and primary school curriculum and teaching reform]. http://xbyx.cersp.com/xxzy/ztlw/200711/2002.html. Accessed 3 Mar 2012.

Shanghai Municipal Education Commission. (2007b). *Shanghaishi zhongxiaoxue ketang jiaoxue youxiaoxing qingkuang baogao* [Analysis report of the effective situation of Shanghai secondary and primary school classroom teaching]. http://xbyx.cersp.com/xxzy/ztlw/200710/1961.html. Accessed 3 Mar 2012.

Shanghai Municipal Education Commission (n.d.). *Shanghaishi putong zhongxiaoxue kecheng fangan (shixing gao) shuoming (shehui ban)* [Explanation for the trial curriculum plan for ordinary secondary and primary schools in Shanghai (social version)]. http://www.shmec.gov.cn/attach/article/72.doc. Accessed 2 Mar 2012.

Chapter 15
The 'Post-Tea House Teaching' Approach

I have not drunk so much Chinese tea in my life until I went to Shanghai in 2011. I was served Chinese tea in *every* school and *every* restaurant. Not that I am complaining.

Shanghai offers a mind-boggling variety of tea, each with its own name, history, growing conditions, processing methods and taste. But what is common among the different types of tea is the art of drinking Chinese tea. One should not drink Chinese tea in a hurry; rather, it is meant to be savoured slowly and meditatively. Furthermore, it conjures up images of good friends chatting and enjoying each other's company while sipping tea. That was what I did when I was reunited with the Shanghai school principals who are my former students – discussing education in Shanghai over a cup of tea somehow made the atmosphere more relaxed and heart-warming.

It is this picture of free-flowing dialogue and mutual edification that prompted Chinese educators to conceptualise a unique teaching approach known as 'Post-Tea House Teaching' [houchaguanshi jiaoxue].

Photo 15.1 Shanghai students learning how to prepare Chinese tea

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_15, © Springer Science+Business Media Dordrecht 2013

The 'Post-Tea House Teaching' Approach

The 'post-tea house teaching' approach originated from a 9-year integrated school in Shanghai led by a special-grade principal, Zhang Renli. This approach is not new but is a revised version of the 'tea house teaching' [chaguanshi jiaoxue] approach introduced by another Chinese principal Duan Lipei back in the 1960s. Duan who was the principal of Yucai junior secondary school in Shanghai proposed reforming education by integrating teaching with practice, linking the new with the old, and applying differentiated instruction. Duan subsequently consolidated his philosophy in 1977 by introducing 4 components or activities, namely, 'read read, discuss discuss, practise practise, talk talk' [dudu, yiyi, lianlian, jiangjiang]. The repeated mention of each verb (e.g. 'read, read') probably serves to reiterate the action involved and make the slogan catchier. This approach has since been revisited and refined in a new approach known as 'post-tea house teaching' (this explains the inclusion of the word 'post'). Besides giving new meanings to the 4 components of 'read read, discuss discuss, practise practise, talk talk', the new approach adds another component of 'do do' [zuozuo].

The school led by Zhang Renli introduced this teaching approach in 2009 as part of the Shanghai municipality's major research on improving students' academic efficacy in the compulsory education phase. For its successful conception and implementation of this teaching approach, the school was awarded first prize in the 'National basic education curriculum reform's teaching-research finding' [quanguo jichu jiaoyu kecheng gaige jiaoxue yanjiu chengguo]. The objective of this approach is essentially to reform teaching as well as teaching management. Explaining why he chose to make reference to a teahouse, Zhang Renli said that 'the emphasis is on "discussion"; the classroom is like a tea-house, full of dialogue, to encourage students to discuss' (Fan, 2011, p. 14). Zhang was prompted to initiate this approach as he felt that most teachers tend to talk too much in the classroom with insufficient student engagement. 'If we do not start encouraging the students to think, then we're only transmitting knowledge; knowledge transmission is not the teaching style we promote', he added (Fan, 2011, p. 14).

His approach underlines student involvement and action. The vice-principal of Zhang's school highlights to me 2 main types of learning for students: 'learning from books' [shuzhongxue] which is indirect knowledge, and 'learning by doing' [zuozhongxue] which is direct knowledge. Post-teahouse teaching style falls under the latter category. As explained by the vice-principal:

> My school focuses on 'Post tea-house style' research and exploration for students to reflect, question, speak, discover, identify and solve problems. It also involves research on classroom teaching for teachers to improve their professional practice through teaching research and classroom practice. Every lesson in my school is involved in this initiative, it is beneficial to students, and every lesson is worthy of research.

It is helpful to elaborate on each of the components in 'read read, discuss discuss, practise practise, talk talk, do do'. We shall start with '*do do*' since this is the newest addition to the approach. 'Do' here does not refer to drilling or practising but learning through research and application so as to add to the student experience. The aim is to help students to gain knowledge comprehensively and to raise their creative

ability by doing. '*Discuss, discuss'* refers to getting students to engage in dialogue, whether it is student-student dialogue, student-teacher dialogue or self-dialogue. This accent on dialogue is contrasted with the traditional transmission approach. It also reminds us of the 'dialogue style' of teaching discussed in previous chapter.

Photo 15.2 The students discussing in pairs

'*Talk, talk*' does not refer to the students talking but the teacher teaching. But unlike the traditional didactic teaching where there tends to be excessive teacher talk, 'talk' here refers to student-centred teaching, as explained by the vice-principal:

> Most people assume that teaching content knowledge means teaching the 'important points' and 'difficult points'. But 'Post-tea house teaching' emphasises teaching what the students themselves do not know. The teacher should not teach what the student is able to learn on his or her own, regardless whether it is the ability to 'read', 'practise' 'do' or 'discuss'. The 'important point' is not necessarily what the student himself or herself is unable to learn; what the teacher thinks as the 'difficult point' is not necessarily the student's 'difficult point'; what the teacher thinks is not a 'difficult point' may be so for the students. This approach emphasises student-centredness. (Ni, 2011, p. 19)

The remaining two components, '*read, read*' and '*practise, practise*', refer to the students engaging in reading and completing the exercises. They are essential activities for the teacher to know how much the student has understood, how much he or she has not understood and the reasons why.

It is important to note that there is no fixed sequence for the 5 activities. In other words, 'read, read' may be appropriate as the first activity for one lesson, but 'discuss, discuss' may be recommended in another lesson. Furthermore, not all the 5 activities need to be carried out in the same lesson as it depends on the situation. The

teacher, therefore, is given the discretion to decide which activities to include, the sequence in which the activities are introduced, and how to incorporate them in his or her lesson. The teacher's judgement is guided by the concept of 'dissimilar conception' [xiangyi gouxiang] introduced by Zhang. He explains:

> I notice that before teaching, many students have already formed many conceptions and experiences, such as 'The faster the car moves, the greater the inertia is' and 'The higher the temperature of a body, the more heat it will produce'. When we turn them into questions, students are often surprised and curious, leading them to spend a longer time to seriously consider these issues, and enter a positive explorative, learning mode. (Zhang, 2008a, p. 37)

It is precisely because of the awareness of students' prior knowledge that the post-tea house teaching approach does not insist that the teacher teaches the 'important points' and 'difficult points' of a subject regardless of the students' ability level. Rather, a teacher should let a student learn first, whether it is through reading, practising or discussing before exposing the students' inadequacies and solving their doubts. Zhang asserts that 'the focus is totally not on what the teacher teaches, but on prompting students to think, exposing what the students do not understand (Fan, 2011, p. 14).

It is interesting to note that the student-centred focus of the post-tea house teaching approach is influenced by Lev Vygotsky's concept of zone of proximal development. Zhang acknowledges that 'I use Vygotsky's zone of proximate development (zuijin fazhanqu) as the fundamental ideology (underlying this initiative)' (Zhang, 2008a, p. 32). Vygotsky's influence is also seen in the educational ideology of Zhang's school that strives to 'design lessons based on the best developmental period, and teach based on the highest zone of proximal development' [an zuijia fazhanqu sheke, chuang zuijin fazhanqu shijiao]. The 'zone of proximal development' refers to the area in which instruction or assistance should be given to children to ensure the optimal development of their skills and mental functions.

Lesson Delivery and Lesson Preparation

The post-tea house teaching approach also affects how teachers plan and deliver lessons. In a traditional lesson delivery, the teacher carries out 5 sequential steps in a cycle:

- Introduce the topic by presenting a scenario.
- Get students to learn new knowledge.
- Consolidate their learning through practice.
- Get students to summarise the lessons learnt.
- Set homework to help consolidate their knowledge.

Zhang and Li (n.d.) note that the above cycle does not fit the 2 fundamental characteristics of the post-tea house teaching approach, namely, that the 'the teacher should not teach what the students can learn on their own' and 'the teacher should develop

students' potential awareness and focus on discovering and solving "dissimilar ideas"' (p. 5). Rather than strictly and blindly following the above 5 steps, the teacher, according to Zhang and Li (n.d.), should, first of all, get the students to read, answer the questions on their own and discuss them with their classmates. The questions should be designed to expose the students' disparate thinking, inadequacies and doubts. The teacher would then discuss the questions with the class, teaches intensively to clarify their doubts and lets the students practise further.

The 'post-tea house teaching' approach is not just about lesson delivery; it has implications for lesson preparation as well. Zhang (n.d.) describes the traditional cycle of teaching as involving 5 sequential steps: preparing the lesson, delivering the lesson, assigning and marking assignments, coaching the students after lesson, and conducting assessment. But the 'post-tea house teaching' approach challenges this sequence in 3 main ways.[1]

First, this approach has shifted the focus of teaching from being subject- and teacher-centred to being student- and learning-centred. Concentrating on the students, the teacher can no longer predesign student-related problems that may arise from the student's learning without first knowing their prior level of knowledge and whether they possess dissimilar conceptions of ideas. No matter how the teacher attempts to foresee the possible questions and ideas that may arise during the lesson and incorporate them into the lesson plan, there is still a gap between lesson preparation and lesson delivery. Such a gap does not arise under the traditional subject- and teacher-centred model.

One implication of student-centred teaching, noted Zhang and Li (n.d.), is that the teacher needs to take note of questions and points arising from the students' small group discussions – these students' inputs cannot be fully anticipated and planned in advance by any teacher. Based on the students' responses in class, the teacher should then make adjustments to the lesson on the spot. In my view, this approach is similar to what Donald Schon terms 'reflection in action' where one reflects on an action while performing that very action. The challenge is for the teacher to demonstrate his or her flexibility, wisdom, grasp of the subject and understanding of students' needs by reacting sensitively to the students' learning in class.

Secondly, Zhang points out that the post-tea house teaching approach entails a change in the conception of student assignment. Traditionally, the assignment activity takes place after the lesson in the form of practice questions for students. But the new approach redefines 'assignment' to include alternative forms of activities for students to practise what they have learnt in class. These may include oral presentations, whole class discussions or small group discussions. The same implications apply to teachers' coaching of students and assessment of them through tests. The

[1] The information is taken from Zhang (n.d.) and Zhang and Li (n.d.). Both are unpublished notes that were given to me by Mr. Zhang Renli when I visited his school on 26 May 2011. I thank Principal Zhang and the Vice-Principal Ni Jiming for discussing their post-tea house teaching approach with me.

requirement for the teacher to expose the students' dissimilar conceptions of ideas and solve their doubts in class means that coaching and assessment should take place both during and after the lesson proper.

Teacher Collaboration and Teacher Research

The post-tea house teaching approach also has a direct impact on teacher research. To equip and empower the teachers to deliver student-centred lessons, Zhang promotes teacher collaboration and research through what is known as the 'empirical cycle' [xunhuai shizheng]. The cycle involves the following 7 steps (Ni, 2011, pp. 24–25):

Empirical Cycle

1. The teacher administers a pretest and a questionnaire at the end of a term and conducts interviews with students.
2. The teacher teaches one class and administers a test (class 1).
3. A teaching-research team comprising teaching-research group members, school leaders and external subject experts critiques the lesson using the post-tea house teaching approach. The feedback is used by the group to design the lesson plan for another class.
4. The teacher teaches another class (class 2) based on the revised lesson plan.
5. The teacher administers a test, and the teaching-research team critiques the lesson and designs a lesson plan for another class.
6. The teacher teaches another class (class 3). Repeat steps (5).

The cycle may be repeated for as many lessons and classes as the team sees fit. An example is the experience of 3 primary 3 teachers in a Chinese lesson preparation group where they applied the post-tea house teaching approach in their teacher collaboration and research (Ni, 2011, p. 27).

An Example of a Lesson

1st lesson: The teacher taught the lesson in the traditional way by emphasising the important and difficult points in writing a Chinese character.

After the lesson, the teachers met to critique the lesson in their lesson preparation group. It was observed that the classroom was very quiet with only the teacher talking and the students listening passively. The team then redesigned the lesson for the next class.

2nd lesson: The teacher asked the students to first learn to write the character on their own. Then they were asked to write it from memory on the spot and the teacher gave them feedback about their mistakes. The teacher then summarised how the character should be written to the class.

The team, in critiquing the lesson, noted that the students were very focused in their self-learning while the teacher was more relaxed in explaining the character compared to the first time. However, the team also observed that the teacher had not fully exposed the students' 'dissimilar ideas' based on their different levels of competency.

3rd lesson: The teacher asked the students to first learn to write the character on their own. Then they were asked to write it from memory on the spot and help one another spot the mistakes made. Then the teacher asked the top student to point out the common mistakes, emphasised the area of focus and highlighted the important points. The students then attempted to distinguish the character from other similar Chinese characters on their own.

The team, in critiquing the lesson, noted this time that the students took over the teacher's teaching role and were able to consolidate their own learning. The students' focus and participation were very high throughout the lesson.

Conclusions

This chapter discussed how the 'post-tea house teaching' approach promotes student-centred teaching, lesson preparation, teacher collaboration and teacher research. Zhang's school reported that the implementation of the 'post-tea house teaching' approach has helped to improve the students' results. According to the vice-principal, students who were taught using the new approach improved their Physics test scores after 6 months (Ni, 2011, pp. 22–3). The school also claims that the 'post-tea house teaching' approach, by being student- and learning-centred, has helped to increase the learning interest and reduce the schoolwork burden of the students. It appears that other Shanghai educators have found this collaborative form of teaching and research helpful. A vice-principal of another school who adopts a similar approach for teacher collaboration in her school said:

> This approach is 'one lesson that is polished many times, conducted many times and revised many times' [yike duomo, yike duoshang, yike duogai]. The teacher is not a 'lone soldier at battle' [danbing zuozhan]. They should cooperate, share, learn and help each other as a body. The shared body is the experimental ground, the research group, which helps the teachers solve classroom problems together, learn from each other's strengths and cover up each other's shortcomings.

So well known is the approach pioneered by the school that thousands of educationists have visited the school to learn more about it and to observe the lessons.

What is interesting about this approach, in my view, is how it is both 'un-Chinese' and 'Chinese'.[2] On the one hand, the approach is radical and 'un-Chinese' in lesson preparation and delivery. As mentioned, the post-tea house teaching approach draws ideas from Lev Vygotsky's zone of proximal development. The emphasis of the Vygotskian notions of language on the verbalisation of thought processes probably explains the preference for talk or verbal participation in Western classrooms (Ryan & Kam, 2009, p. 412). Conversely, there has been no dominant theory in the history of China that encourages verbal participation in the Chinese classrooms. Instead, the focus has been on teacher talk through the transmission approach, as noted in the previous chapter. Chinese academic Zhong avers that '[s]ince 1949, we have adopted Kerov's pedagogy and Bavrov's conditioned reflex psychology as mainstream educational theories, while neglecting the really good educational theories of the Soviet Union, such as Vygotsky's proximal zone theory' (2006, p. 376). Against the historical and educational backdrop of China, the post-tea house teaching approach, by propagating student talk based on Vygotsky's ideas, is a bold attempt to promote verbal participation in the Chinese classrooms.

The post-tea house teaching approach is also un-Chinese by going against the traditional Chinese thinking that a teacher needs to prepare and conduct a lesson thoroughly by teaching all the 'important points' and 'difficult points'. Instead, a teacher should begin, not from the subject or the teacher but from the students' dissimilar conceptions, and prepare and conduct the lesson accordingly. As mentioned, this may mean not including one or more of the activities of 'read', 'discuss', 'practise, 'talk' and 'do'. That is why Zhang claims paradoxically that 'a teacher's incomplete lesson is actually a good lesson; a teacher who teaches a complete lesson is not necessarily giving a good lesson' (Fan, 2011, p. 14).

However, the 'post-tea house teaching' approach is distinctively Chinese in 2 main ways, apart from its reference to tea which is a cultural heritage for the Chinese. First, the steps in the traditional lesson preparation cycle and lesson delivery cycle are not jettisoned; the new approach just gives the teacher greater discretion in ordering the steps or removing a step that may not be necessary for a particular class. Furthermore, the teachers still have to teach the 'important points' and 'difficult points' – teaching points that Chinese teachers are familiar with and good at. What the post-tea house teaching approach requires is for the teacher to teach the class in a way that takes into consideration the students' prior knowledge and learning abilities. Secondly, the implementation of this approach takes advantage of

[2] By referring to 'Chinese' and 'un-Chinese' approaches, I am not assuming that there is only one 'Chinese' approach and one 'un-Chinese' approach. Neither am I assuming that the Chinese approach is monolithic and universally shared by all Chinese. In this sense, I am cautious not to fall into the same trap of 'homogenising and thus misinterpreting a [Chinese] cultural tradition that is as complex and diverse as any other' (Ryan & Kam, 2009, p. 407). But I think it is also erroneous to swing to the other extreme and claim that there are no Chinese cultural traditions to speak of. My stand is that there exist traditions that groups of people subscribe to, and these traditions are themselves dynamic, evolving and subject to scrutiny and change. See my discussion of traditions in the introductory chapter. For a case study of traditions in Indonesia, see Tan (2011b).

the Chinese preference for and strength in teacher collaboration and action research. This is important especially for new initiatives where sharing of ideas and group research can enhance learning and shorten the learning curve.

It is evident that Chinese educators such as Zhang Renli are open to and capable of combining the best from East and West to conceptualise and implement new practices with Chinese characteristics. In short: welcome to drinking Chinese tea in 21st Shanghai.

References

Fan, X. (2011, July 17). *Taba keshi biancheng chaguan* [He converts the classroom into a tea-house]. *Zaobao Xinqitian*, p. 14.

Ni, J. (2011). *Cultural identity-based management to improve school teaching and research.* Unpublished master's dissertation, National Institute of Education, Nanyang Technological University.

Ryan, J., & Kam, L. (2009). False dichotomy? 'Western' and 'Confucian' concepts of scholarship and learning. *Educational Philosophy and Theory, 39*(4), 404–417.

Tan, C. (2011b). *Islamic education and indoctrination: The case in Indonesia*. New York: Routledge.

Zhang, R. (n.d.). *Hou 'chaguanshi' jiaoxue (ba): ruogan linian sikao* [Post tea-house style teaching (8): some thoughts on concepts]. Unpublished notes.

Zhang, R. (2008a). *Jujiao youxiao jiaoyu de shinian* [Ten years of focused and effective education]. Beijing: People's Education Press.

Zhang, R. & Li, L. (n.d.). *Xunhuan shizhen' jiaokeyan fangfa (san)* [Post 'tea-house style' teaching (3): 'Empirical cycle' teaching research method]. Unpublished notes.

Zhong, Q. (2006). Curriculum reform in China: Challenges and reflections. *Frontiers of Education in China, 1*(3), 370–382.

Chapter 16
Critical Thinking: The Chinese Way

'Regarding this issue, there are 4 aspects/factors/reasons for it. Firstly … Secondly … Thirdly … Finally …'.

The above is a typical speech pattern of many Shanghai principals and teachers I spoke to. Whether it is in their talking or writing, a common practice is for them to articulate their thoughts clearly and sequentially. I have yet to come across a Chinese speaking or writing in a rambling fashion or giving unorthodox or wacky answers.

The above Chinese characteristic stems largely from an education system where systematic and logical thinking is underscored. As a Shanghai principal puts it, the exam selection process currently implemented in China rewards children that excel in mathematical logic and possess keen deductive abilities (Ho, 2006, p. 176). But what about other types of thinking, especially critical thinking – a form of thinking that is more often associated with 'Westerners' rather than East Asians? Is critical thinking being promoted in the Shanghai classroom, and if so, what form does it take? To answer the above questions, let us begin with the concept of critical thinking.

Defining Critical Thinking

Different authors have defined critical thinking in different ways (e.g. see Glaser, 1941; Ennis, 1987, 1996; Fisher, 2001; Lipman, 1998, 2003, 2007; Paul, 1988; Paul & Elder, 2008; Siegel, 1988; Tan, 2006, 2007b; Tan & Crawford, 2006). For example, Richard Paul and Linder Elder (2008) define critical thinking as 'the intellectually disciplined process of actively and skilfully conceptualising, applying, analysing, synthesising, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action'. Another critical thinking proponent, Edward Glaser (1941), asserts that the ability to think critically involves 3 things: an attitude of being disposed to consider in a thoughtful way the problems and subjects that come

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_16, © Springer Science+Business Media Dordrecht 2013

within the range of one's experiences, knowledge of the methods of logical inquiry and reasoning, and some skill in applying those methods.

In trying to obtain a working definition of critical thinking for our exploration, it is helpful to go back to the root meaning of 'critical'. The etymology of the word 'critical' is traced to two Greek roots: 'kriticos' (meaning discerning judgement) and 'kriterion' (meaning standards). Hence, the word 'critical' implies the development of 'discerning judgement based on standards' (Elder, 2007). Following the basic meaning of critical thinking as forming judgement based on certain standards, I am inclined to adopt the definition of critical thinking given by Matthew Lipman. He defines critical thinking as follows:

> [Critical thinking is] a form of thinking that facilitates judgement because it relies on criteria, is self-correcting and is sensitive to context. (Lipman, 2007, p. 428)

The 'judgement' here could refer to a number of things, such as the following (Lipman, 2007, p. 432):

- Settlements of deliberations
- Verdicts of trials or inquests
- Decisions by administrators, executives, parents, teachers, etc.
- Determinations: conclusive findings of investigative proceedings
- Solutions to actual or theoretical problems
- Classifications or categorisations
- Evaluations of performances, services, objects, products, etc.
- Assessments
- Distinctions, in the form of negative predications
- Connections, in the form of affirmative predications
- Deliberate, intentional makings, saying or doings

The judgement, in order to be 'critical', needs to fulfil 3 conditions: it relies on criteria, is self-correcting, and is sensitive to context. Let us look at them in turn.

Relies on Criteria

First, critical thinking does not mean passing one's judgement in an arbitrary way. Rather, it relies on specific criteria that may come in the following forms (Lipman, 2007, p. 428):

- Shared values, such as ideals, purposes, goals, aims and objectives
- Conventions, such as norms, regularities, uniformities, and precedents or traditions
- Common bases of comparison, such as shared respects, properties or characteristics
- Requirements, such as precepts, specifications, stipulations and limitations
- Perspectives, including areas of concern, frames of reference and points of view

- Principles, including assumptions, presuppositions and theoretical or conceptual relationships
- Rules, including laws, by-laws, regulations, charters, canons, ordinances and directions
- Standards: criteria for determining the degree of satisfaction needed to satisfy a criterion
- Definitions: assemblages of criteria that together have the same meaning as the word to be defined
- Facts: what there is, as expressed in warranted assertions
- Tests: probes or interventions for the purpose of eliciting empirical findings

Self-Correcting

Secondly, critical thinking is not equated with criticism where the student is negative, cynical and quick to pass judgement. Instead, it is self-correcting in the sense that the thinker constantly reflects on his or her own thinking (metacognition), with the aim of discovering his or her own weaknesses and rectifying what is at fault in his or her own thought process. Lipman (2007, p. 429) gives the following examples of associated behaviours of self-correction:

- Students point out errors in each other's thinking.
- Students acknowledge errors in their own thinking.
- Students disentangle ambiguous expressions in texts.
- Students clarify vague expressions in texts.
- Students demand reasons and criteria where none have been provided.
- Students contend that it is wrong to take some matters for granted.
- Students identify inconsistencies in discussions.
- Students point out fallacious assumptions or invalid inferences in texts.
- Students identify the commission of fallacies in formal or informal reasoning.
- Students question whether inquiry procedures have been correctly applied.

Sensitive to Context

Finally, critical thinking always takes place in a particular sociocultural context. This brings us back to my point in the introductory chapter about the role of a 'tradition' – a social process of constructing shared meanings that seek to instruct a community of members on the correct form and purpose of a given practice. All our beliefs and assumptions – in other words, our cultural scripts – are formed, organised and legitimised by the tradition we belong to.

It is therefore pertinent for educators to be wary of universal and context-free critical thinking skills and be sensitive instead to the specific context in which the questioning and thinking take place. The teaching of critical thinking should be set within a larger framework where factors such as the political, social, economic and cultural climate and alternative methods are taken into account. Knowing the context will guide the educator and students on what, how and when to question. While critical thinking is essential, students should also learn about the fallibility and finiteness of critical thought. Otherwise, the quest for critical thinking may ironically make a person uncritical by causing him or her to hold dogmatically to one's unquestioned assumptions (Tan, 2006).

According to Lipman, some examples of associated behaviours on acquiring sensitivity to context are (2007, pp. 431–432):

- Students differentiate among nuances of meaning stemming from cultural differences.
- Students differentiate among nuances of perspectives or points of view.
- Students recognise differences due to language differences, disciplinary differences and differences of frames of reference.
- Students contend to establish the authenticity and integrity of interpretations of texts.
- Students contest the accuracy of translations.
- Students point out how definitional meanings are modified by contextual circumstances.
- Students note changes in meaning due to alteration of emphasis.
- Students recognise changes in meaning resulting from shifts in speakers' intentions or purposes.
- Students note discrepancies between the present situation and seemingly similar past situations.
- Students search for differences between seemingly similar situations whose consequences are different.

In trying to understand whether and how critical thinking is promoted in the Shanghai schools, I would like to begin by sharing my observations of a lesson in a Shanghai school. My intention is not to use the research data from my lesson observation to draw any conclusions about critical thinking in Shanghai. Rather, my purpose is to use the lesson observation to illustrate how critical thinking, based on Lipman's definition, may look like in a typical Chinese classroom. The section on lesson observation will be followed by a discussion of the nature of critical thinking in Shanghai based on literature review and interview data.

Lesson Observation

I observed a Chinese language lesson for a senior year 2 class in a senior secondary school in Shanghai in May 2011. I shall clarify that this lesson did not focus on the topic of critical thinking; it was a typical Chinese language lesson and was not designed

as a special lesson to be observed by a visitor to the school. Observing the lesson with me was the school principal and 3 teachers who were from the same teaching-research group as the teacher who conducted the lesson. In Shanghai/China, it is common for teachers, especially from the same teaching-research group or lesson preparation group, to observe and critique one another's lessons (see Chap. 17 for more information on teacher collaboration). I was given the students' materials and teacher's notes at the start of the lesson. I took down notes during the lesson as well as took photos of what the teacher wrote on the board and the students in action. The lesson was (obviously) conducted in Mandarin (Putonghua), and all the English translation was done by me. After the lesson, I met and interviewed the teachers who observed the lesson.

Some background information on the Chinese language subject is helpful to the readers before I discuss the lesson observation. The subject, simply known as 'Language' [yuwen], is a compulsory subject for all senior secondary students in Shanghai. The exam paper comprises 2 components: reading (80 marks) and essay writing (70 marks), totalling 150 marks. The lesson I observed was on essay writing. What is unique about the exam format for essay writing is that no essay title is given to the students. Instead, the students are expected to come up with their own essay title based on the information given and the perspective they choose to adopt. This type of essay is known as 'material essay' [cailiao zuowen] (see Chap. 11 for details of the Chinese language exam format). A Chinese language teacher of the school explained to me:

> Now Shanghai's essay writing appraisal standard emphasises two aspects. First, what's the viewpoint of the material, and what's your reflection on the viewpoint based on reality? Students need to have their own viewpoints and demonstrate the depth of their reflection by expressing their cultural accumulation. At the same time, the viewpoint must reflect the material given. Secondly, after having a clear viewpoint that reflects the material, the student should be able to write a full and rich essay, arising from the student's natural analysis, level-by-level, and illustrated with examples. The current exam system has given students much room to express themselves, not to pre-determine what's good to them.

The teacher added that 'as long as your writing is related to the material, and you write in a relevant and reasonable way, that's okay'.

The topic of the lesson, as stated in the teacher's notes, is on formulating a thesis statement for a 'material essay'. The teacher's notes state that the teaching objectives are to help students to understand the unique characteristics of a material essay, to master the steps and method of formulating the thesis statement of material essay, and to raise their thinking quality in formulating and elaborating on their thesis statement for the material essay. The teacher's notes also identify 3 requirements of a good thesis statement:

(a) The thesis statement needs to be related to the material's content to clearly capture the link between one's viewpoint and the material.
(b) The thesis statement needs to make use of and analyse the material provided.
(c) The thesis statement can agree, disagree or supplement the essence of the material.

The teacher began by giving students an example of a material essay question. This question, I was told later by the principal, was an actual past year exam question for the senior secondary students set by the district.

Essay Question

Famous columnist Harris and his friend were buying newspapers from a newsstand. Harris' friend very politely thanked the newspaper vendor, but the vendor just gave him a cold look and did not say a word.

'That man's attitude is really bad, right?' Harris remarked to his friend as they walked off.

'He's like that everyday'. His friend replied.

'Then why are you still so polite to him?' Harris asked.

His friend replied: 'Why must I let him determine my behaviour?'

The essay question is followed by 26 thesis statements formulated by students from other classes who have already written their essays based on this question. The teacher then posed the class 2 questions:

Question 1: Identify what you think are the wrong thesis statements, and give your reasons.
Question 2: Identify what you think are the suitable and more memorable thesis statements, and give your reasons.

Photo 16.1 The students discussing in small groups

She then asked the students to get into groups of 4 to discuss the questions. After about 15 min, the teacher randomly selected some student leaders to share their group's views. The students correctly identify some of wrong thesis statements such as 'Persevere', which was deemed too simple and inappropriate as an essay title. An example of an appropriate thesis statement noted by the students was 'Be your own helmsman, have your own independent thinking, hold on to your principles'.

The teacher then analysed the list of thesis statements with the class. She explained to the class that a good thesis statement for this material essay must bring out the contrast between the values and behaviour of Harris and those of the newspaper vendor. She wrote the following sentences on the board with the keywords underlined as follows:

I do not allow <u>him</u> to determine <u>my behaviour</u>.

'him' = a cold look, the outside world, other people's thinking and behaviour, the social environment, trends of the times, representing what is wrong, ugly

'my behaviour' = your own qualities, principles, goals, life attitude, representing what is positive, autonomous

She then highlighted other examples of wrong and appropriate titles from the list of thesis statements as follows:

<u>Examples of wrong titles pointed out by the teacher</u>

- 'Live for yourself'. (The teacher said this was too vague.)
- 'The pen that describes your life is in your own hands'. (The teacher said this was too general.)
- 'Persevere to do your duty, preserve your heart'. (The teacher said there was insufficient link to the material given in the essay.)

<u>Examples of appropriate titles pointed out by the teacher</u>

- 'Do not let the environment easily change you, make sure it's you and not others who decide how you should live'.
- 'Do not be ashamed of being different from others, because it's possible that you have made the right decision despite being in the minority'.
- 'Why must we allow the imperfections of others, the times and the world to determine our behaviour? This world may influence and inspire us, but we should not let it determine our behaviour'.

Next, the teacher distributed some model essays on this essay topic to the class. These essays were top-scoring essays written by students in the senior year 2 and year 3 classes. She asked the class to read through the essays and share with their group mates their observations about the essays. After some time, she called upon some students to share their views, and they noted aspects such as 'The essay makes references to historical sources by quoting the words of an ancient sage' and 'The writer gives examples from his life'.

Photo 16.2 The teacher encourages students to share their answers

Projecting the essays from the computer screen, the teacher then went through a model essay and explained why it was considered well written:

- It has a good thesis statement that captures the essence of the material. ('Why must I let him determine my behaviour? We all need to perform our duties; "the other person" will never be a good excuse.')
- The essay has a good essay title ('Need to be responsible for one's actions').
- It is well structured with 5 paragraphs, each paragraph has a topic sentence, and every paragraph is linked to the title.
- It has good examples from the writer's personal life.
- It quotes from classical sources.

The teacher concluded the lesson on that note.

After the lesson, I met the 3 teachers who sat in the lesson to discuss the lesson. The teacher who conducted the lesson was unable to join us as she had another lesson to teach. I was told that the 3 teachers would meet her later to review the lesson with her. This is a common practice in Shanghai where teachers observe and critique each other's lessons for mutual learning and improvement.

The teachers informed me that there was actually a second part to the lesson but the teacher was unable to cover that because of time constraints. The second part had been documented in the teacher's notes given to me. According to the teacher's notes, the plan was for the students to give their own viewpoints and assess the model essays after analysing them. The teacher's notes state that an appropriate viewpoint is, first of all, a thesis statement that is accurately based on

the foundation of the material and does not stray from the topic. Secondly, a good thesis statement is novel and in-depth rather than superficial; this is achieved by asking 'why' questions.

Evaluation of the Lesson: Evidence of Critical Thinking

If we apply Lipman's definition of critical thinking to this lesson, we can identify some elements of critical thinking present. The *judgement* in question here is an evaluation of the thesis statements and essays of other students. The *criteria* for judgement are the standards for determining the degree of satisfaction needed to satisfy a criterion. That this lesson focuses on essay writing makes the question of criteria easy, since the criteria are stipulated in the subject syllabus and the exam format. The criteria determining a good thesis statement for material essays are also stated in the teacher's notes and highlighted to the class (recall that the criteria are that the statements need to be accurate, novel and in-depth).

It is instructive that some elements of critical thinking have been built into the requirements for essay writing. The first two requirements that the thesis statement needs to be related to the material's content and that the thesis statement needs to analyse the material provided are criteria that the students need to rely on to formulate their thesis statements. The third requirement stipulates that the thesis statement can agree, disagree or supplement the essence of the material, giving room for the students to express their own ideas as long as the thesis statement fulfils the first two criteria.

The teacher also encouraged *self-correction* by getting students to compare and contrast and point out the errors in the thesis statements. By highlighting some thesis statements as too ambiguous or vague and emphasising the need to show contrast in the thesis statement, the teacher is prompting the students to clarify, question and reflect. As noted by a teacher who observed the lesson:

> We hope that through a critique of the essays, the students will know how to grasp the key points of a material, how to write a better essay. It is not just to list the different viewpoints presented by students, but for students to evaluate a range of viewpoints, from the good to the bad.

The need to be *sensitive to context* is also evident in the lesson. The students were asked to differentiate between nuanced perspectives or points of view based on the material essay. They were also asked to establish the authenticity and integrity of interpretations of the material essays through the thesis statements.

The second part of the lesson plan that was not conducted due to a lack of time also has the potential to promote critical thinking. The plan for students to formulate their own thesis statements and assess them later encourages them to form their own judgements based on specific criteria. The assessment encourages self-correction and sensitivity to the context as the students will reflect on and look out for any possible errors in their thesis statements based on the material essay.

Overall, it can be observed that some form of critical thinking, in the sense of developing a 'discerning judgement based on standards' is evident in the lesson I have observed. The students have been encouraged to form their judgements based on clear criteria while remaining self-correcting and sensitive to the context. Applying Paul and Elder's (2008) definition of critical thinking, we also see how the students were involved in an intellectually disciplined process of actively, applying, analysing, synthesising and evaluating information gathered from reflection, reasoning and communication, as a guide to belief and action. In the same vein, with reference to Glaser's (1941) definition, it is apparent that the teacher has consciously guided the students to consider in a thoughtful way the problems and subjects that come within the range of one's experiences, knowledge of the methods of logical inquiry and reasoning and some skill in applying those methods.

My interviews and interactions with the Shanghai educators from this school and other schools, as well as relevant literature review, suggest that critical thinking, albeit with Chinese characteristics, exists in Shanghai schools. It is arguable that the promotion of critical thinking, using Lipman's definition, contributes towards the strong performance of Shanghai students in international assessments. OECD (2010a) reports that more than a quarter of Shanghai students, compared with 3% in OECD countries, can conceptualise, generalise and creatively use information based on their own investigations and modelling of complex problem situations using mathematics (p. 3). Areepattamannil (2012), based on his analysis of the PISA data, concludes that metacognitive strategies such as deep understanding and synthesis were positively associated with the Shanghai students' mathematical literacy in the 2009 PISA. That Shanghai students have topped not just the mathematics but reading and science categories demonstrates that they can apply insight and understanding to develop new approaches and strategies, which are then used to answer the PISA questions. In short, the Shanghai students have demonstrated their abilities to form self-correcting and contextually sensitive discerning judgement based on standards, which is the essence of critical thinking.

Discussion: 'Chinese-Style' Critical Thinking

I would like to suggest that a 'Chinese-style' critical thinking, embodying 2 Chinese characteristics, prevails in Shanghai schools.[1] First, Shanghai teachers skilfully combine critical thinking and exam preparation in their teaching, as illustrated in the lesson I observed and pointed out by the teachers I have interviewed. That the teachers are keen to incorporate some form of critical thinking in their teaching is due to the change in the exam format that includes open-ended questions, such as the material essay question for Chinese language. 'The exam doesn't test you on your knowledge of the teaching materials but your ability and application', said a

[1] For a discussion of how critical thinking is promoted in another East Asian society, Singapore, see Tan (2007b). The book is a collection of essays written by primary, secondary and preuniversity school teachers in Singapore.

Chinese language teacher. 'To prepare for gaokao, you've to teach ability', said another teacher. She elaborated:

> If you just make the students memorise, it is not possible to do well because the exam questions, essay questions, are not from the textbook. If a student can write a standard essay, give his views, give his stand and support it with evidence, then he will do well for gaokao. So I think for the Chinese language assessment, it's about ability.

In terms of the method used to foster critical thinking, most Shanghai teachers incorporate critical thinking skills into class activities and assignments that are closely linked to the academic subjects. Due to the demands of the exam, teachers have also changed their teaching methods to promote critical thinking. A teacher shared with me the strategies used in her school:

> For the Chinese language, students need to demonstrate their ability to express their views using words, so to understand a passage, that's application. And you need to express the meaning of your essay topic through words. In our classroom, we follow the Socrates' style of teaching, we don't just share the answer with students, our aim is to train the students' thinking. We'll raise a controversial or open-ended issue and let them discuss, debate, research and finally arrive at their own conclusions, or they may not even have a conclusion. We focus on researching the approach to a text, and not just teach what the text is about. We analyse one essay to see what essay category it belongs to, to understand the character of the essay, how to read it, what to look out for, based on the characteristics of the passage, times, materials. … Even before PISA in Shanghai, the syllabus requirement emphasised developing students' abilities in understanding and analysis, induction and appraisal.

The above teaching approaches are salutary in getting students to identify inconsistencies and fallacies in discussions, point out errors in each other's thinking, disentangle ambiguous expressions in texts, clarify vague expressions in texts, question whether inquiry procedures have been correctly applied, differentiate between nuances in perspectives or points of view, point out how definitional meanings are modified by contextual circumstances and recognise changes in meaning resulting from shifts in speakers' intentions or purposes: these are all evidences of critical thinking behaviour mentioned by Lipman.

Halstead and Zhu (2009), based on their research in a senior high school in Beijing, argue that 'learner autonomy is currently hardly a reality at all in the classroom' due to teacher-dominated teaching and the requirements of the exam system (p. 443). Learner autonomy is defined as the ability to take charge of one's own learning and involves the capacity for detachment, critical reflection, decision-making and independent action. However, my research shows that learner autonomy is apparent in Shanghai classrooms. Shanghai teachers attempt to encourage the students to critically reflect on their work and make their own judgement. This is made possible because of the exam format – the essay question is set broadly so that students are at liberty to offer their own answers. Learner autonomy, however, is not the same as personal autonomy. Halstead and Zhu (2009) note that 'personal autonomy' is 'based on western liberal values of individual freedom, the need to subject all beliefs to rigorous rational criticism and the refusal to accept anything merely on authority, whereas "learner autonomy" has the more limited aim of encouraging students to take responsibility for their own learning' (p. 446). But it is questionable if we can and should subject *all our* beliefs to rigorous rational criticism and the refusal to accept *anything* merely on authority.

The second characteristic of critical thinking in Shanghai is that it is one where the students logically arrive at a reasonable conclusion based on specific standards. The conclusions that the students are encouraged to form tend to be those that are already socially and culturally accepted in China. In other words, they do not, returning to Lipman's conception of critical thinking, 'demand reasons and criteria where none have been provided' and 'point out fallacious assumptions or invalid inferences in texts' (Lipman, 2007, p. 429). A principal explained to me:

> The focus is not to doubt, to criticise, especially in the humanities. The conclusion has been given to you, but you've to learn how the conclusion is arrived at. The focus is not for you to question the conclusion itself.

This 'Chinese-style' critical thinking is shaped and circumscribed by historical, political and sociocultural factors. Historically, knowledge has been based on textual transmission with the imperial exam testing the students' mastery of the classics. Although the students may have (and are now encouraged to have) different interpretations of a text, they are generally not encouraged to doubt the text itself or to criticise the author of a prescribed text. Chinese teachers do not spur their students to raise doubts about the content of teaching materials because these materials are ultimately the guides for students to do well in the exam (Shangguan, 2005, p. 91). The political climate also places constraints on free speech. As a principal noted, 'China is still trying to break free of forbidden zones, many domains still have ideological oppression, especially in the humanities, it is difficult to apply the Chinese saying of "the words of children are harmless" [tongyan wuji]'. Socioculturally, students who grow up in a single-child family environment in China tend to be protected and doted on by their parents and teachers and therefore may not be used to independent questioning and doubting.

The Chinese form of critical thinking implies that we should use labels such as, 'student-centred learning' and 'constructivism' with sufficient qualification in the Chinese context. For example, Cheng (2011) asserts that Shanghai's reform discourse is underpinned by constructivist learning 'in which the students use information from the environment (including the teacher) to construct their own knowledge base, assessing new knowledge, piece by piece, to develop a framework that the student continually reconstructs to interpret and understand their world with' (p. 31). Another academic Zhong (2006), commenting on curriculum reform in China, claims that education practice in China has changed from 'behaviourism, which studies the control of the behaviour of learners, to constructivism where the learners themselves can challenge the objective world, find its value and significance, and then reconceptualise the meaning of the objective world' (p. 378).

While it is true that there is a discernible attempt to promote a form of learning that reflects elements of constructivism, I do not think that the form of learning promoted qualifies as 'constructivism' as defined by Cheng and Zhong. There is little evidence to suggest that Shanghai students are encouraged to go to the extent to 'construct their own knowledge base' and 'reconceptualise the meaning of the objective world'. While the students are encouraged to think critically, their thinking is still circumscribed by the sociocultural realities they live in. I should, however, qualify that I am not claiming that the Chinese are incapable of thinking critically

about their own political, social and educational systems. The online discussion forums are replete with strong views and rigorous debates posted by mainland Chinese (anonymously) on various current and controversial issues.

Conclusion

This chapter discussed how Shanghai educators adopt a 'Chinese-style' critical thinking that is culturally appropriate. What is distinctive about critical thinking in a Chinese context is that the Shanghai educators are able to interpret and promote critical thinking in a way that suits their local needs – to prepare students for the exam, without turning it into a tool that threatens political and social order.

More empirical research needs to be carried out for us to have a deeper understanding of 'Chinese-style' critical thinking. But it is important for researchers, especially those who are not from an East Asian background, to guard against cultural bias in defining critical thinking. Quoting Mason (2007, pp. 339–340), we need to ask ourselves the following questions:

- To what extent, for example, are the dominant concepts of thinking and learning a product of 'western' cultural values?
- Might they be in conflict with concepts and values said to be prevalent in many Confucian-heritage cultures that apparently stress the meditative mind, harmony of thought and harmony in relationships, filial piety, a tempered questioning of authority and the transmission of received wisdom through time?
- Might the liberal ideal of the independent and autonomous individual clash with communitarian values of identity in relationship?[2]

It is interesting to note that Durkin (2008), in her research of the challenges faced by East Asian students in adapting to 'Western' norms of critical thinking and argumentation in the United Kingdom, points out that East Asian students value maintaining harmony and avoiding offence or confrontation; hence, many perceived Western methods of critique as being 'insensitive and unnecessarily offensive' and 'felt uncomfortable when they saw critical thinking and debate degenerate into hurtful cynicism' (p. 23). Durkin advocates a culturally sensitive approach to critical thinking or what she calls the 'Middle Way'. She explains:

> The Middle Way thus begins the search for truth with an 'agnostic empathy' towards all views presented. This involves a sensitive 'openness' to another's viewpoint, a determination to listen fair-mindedly and delay judgement and critical evaluation until the other's position is fully understood and 'entered into' in a sympathetic fashion. (Durkin, 2008, p. 23)

I think Durkin's suggestion will be welcome in Shanghai schools.

[2] That is why I prefer a definition of critical thinking that adheres as closely as possible to its etymological roots of judgement and standards. In this regard, Lipman's definition, in my view, accurately reflects the essence of critical thinking. For discussion on the relationship between critical thinking, Confucius and Confucian/Asian culture, see Chiu (2009), Han and Scull (2010), and Kim (2003).

References

Areepattamannil, S. (2012, March). *Influences of metacognitive and self-regulated learning strategies for reading on mathematical literacy of adolescents in four high-performing education systems*. Paper presented at the CRPP Research Seminar, National Institute of Education, Singapore.

Cheng, K.-M. (2011). Shanghai: How a big city in a developing country leaped to the head of the class. In M. S. Tucker (Ed.), *"Surpassing Shanghai": An agenda for American education built on the world's leading systems* (pp. 21–50). Cambridge: Harvard University Press.

Chiu, Y.-C. J. (2009). Facilitating Asian students' critical thinking in online discussions. *British Journal of Educational Technology, 40*(1), 42–57.

Durkin, K. (2008). The adaptation of East Asian masters students to western norms of critical thinking and argumentation in the UK. *Intercultural Education, 19*(1), 15–27.

Elder, L. (2007). *Our concept and definition of critical thinking*. http://www.criticalthinking.org/pages/our-concept-and-definition-of-critical-thinking/411. Accessed 8 Jan 2012.

Ennis, R. H. (1987). A taxonomy of critical thinking dispositions and abilities. In J. B. Brown & R. J. Sternberg (Eds.), *Teaching thinking skills: Theory and practice* (pp. 9–26). New York: W.H. Freeman.

Ennis, R. H. (1996). *Critical thinking*. Upper Saddle River: Prentice Hall.

Fisher, A. (2001). *Critical thinking: An introduction*. Cambridge: Cambridge University Press.

Glaser, E. M. (1941). *An experiment in the development of critical thinking*. New York: Teacher's College, Columbia University Press.

Halstead, M., & Zhu, C. (2009). Autonomy as an element in Chinese educational reform: A case study of English lessons in a senior high school in Beijing. *Asia Pacific Journal of Education, 29*(4), 443–456.

Han, K., & Scull, W. (2010). Confucius culture in the mainstream classroom: A case study of an Asian American student. *The International Journal of Learning, 17*(1), 601–616.

Ho, X. (2006). Xiaoben kecheng de kaifa he guanli [The launch and management of school-based curriculum]. In Y. Shen (Ed.), *Zou xiang youzhi jiaoyu* [Walking towards quality education] (pp. 170–192). Shanghai: East China Normal University Press.

Kim, H.-K. (2003). Critical thinking, learning and confucius: A positive assessment. *Journal of Philosophy of Education, 37*(1), 71–87.

Lipman, M. (1998). Critical thinking – What can it be? *Educational Leadership, 46*, 38–43.

Lipman, M. (2003). *Thinking in education* (2nd ed.). Cambridge: Cambridge University Press.

Lipman, M. (2007). Education for critical thinking. In R. Curren (Ed.), *Philosophy of education: An anthology* (pp. 427–434). Malden: Blackwell Publishing Ltd.

Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: From research to results*. Alexandria: Association for Supervision and Curriculum Development.

OECD [Organisation for Economic Co-operation and Development]. (2010a). *PISA 2009 results: What makes a school successful? – Resources, policies and practices* (Vol. IV). http://dx.doi.org/10.1787/9789264091559-en. Accessed 12 Apr 2011.

Paul, R. W. (1988). *What, then, is critical thinking?* Rohnert Park: Center for Critical Thinking and Moral Critique.

Paul, R., & Elder, L. (2008). *The miniature guide to critical thinking concepts and tools*. http://www.criticalthinking.org/pages/defining-critical-thinking/766. Accessed 15 Jan 2012.

Shangguan, Z. M. (2005). *Jiaoyu de guoji shiye* [Education's international vision]. Shanghai: East China Normal University.

Siegel, H. (1988). *Educating reason: Rationality, critical thinking, and education*. New York: Routledge.

Tan, C. (2006). Creating thinking schools through 'Knowledge and Inquiry': The curriculum challenges for Singapore. *Curriculum Journal, 17*(1), 89–105.

Tan, C. (Ed.). (2007b). *Engaging films and music videos in critical thinking*. Singapore: McGraw-Hill.

Tan, C., & Crawford, L. (2006). *Knowledge and inquiry: An introduction to epistemology*. Singapore: Prentice Hall.

Zhong, Q. (2006). Curriculum reform in China: Challenges and reflections. *Frontiers of Education in China, 1*(3), 370–382.

Chapter 17
Kung Fu Panda: Teacher Mentoring and Collaboration

One of my favourite movies is *Kung Fu Panda*. The movie is about a panda Po who became a disciple of Master Shifu who is an expert in martial arts or kung fu. The movie hilariously shows how Po – a fat, clumsy and lazy panda – learnt martial arts from his master. The master cleverly combines gruelling training with unconventional teaching methods such as enticing greedy Po with food. Joined by his kung fu compatriots and supportive peers – Tigress, Monkey, Mantis, Viper and Crane – Po triumphantly defeats the villain Tai Lung at the end.

This movie may be a comedy, but it does capture the essence of Chinese martial arts. To learn kung fu, you need to submit yourself to a master – usually a much older person who has spent many years learning and mastering the kung fu. Mastering kung fu means following the strokes taught by the master and sometimes with additional help from a manual. The training is tough and time-consuming, requiring much patience, discipline and humility. The disciple is often not alone but surrounded by peers. And the goal of every disciple is to be as good as his or her master someday. A good master, on the other hand, needs to be knowledgeable and provide sufficient training to help his or her disciples master kung fu.

The kung fu analogy, in my view, is helpful for us to understand teacher mentoring and collaboration in China. Shanghai, despite its modern and international image, subscribes to many traditional Chinese values and practices. For example, almost all schools have a mentoring system for young teachers and the system is known as 'master-disciple mentoring' [shitu daijiao]. An elderly teacher used the term 'neigong' – literally 'inner strength' and a word that is usually associated with one's mastery of martial arts – to explain how Shanghai teachers are given much training to improve their 'inner teaching quality'. By discussing teacher mentoring and collaboration in Shanghai schools, this chapter highlights their roles in facilitating the teachers to become 'kung fu masters'.

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_17,

Teacher Mentoring

Teacher mentoring is featured prominently in Shanghai schools. Almost all schools have a structured teacher mentoring system where new teachers are assigned a mentor – an experienced teacher – for typically 3 years. My interviews and interactions with Shanghai educators reveal that most teachers find mentoring by an older teacher salubrious for their professional growth. The general perception in Shanghai/China is that older teachers have already gained substantial teaching experience and therefore are able to transmit their integrated theory, knowledge and practical ability to new teachers. It also helps that the Chinese generally have a strong respect for older persons due to Confucian influences. In fact, the Chinese term for 'teacher' is 'laoshi' which means 'old expert or master'.

The mentoring process covers all aspects of teaching, such as discussion of teaching materials, lesson observation and critique, sharing of teaching methods and setting and marking assignments. A young teacher who was mentored shared her experience:

> I'm very fortunate to become Teacher Xin's disciple. For a year, he insisted on observing my lesson every week. After lesson, he will give me a critique of it; sometimes he will direct me on the spot in class. (Wu, Zhang, & Tian, 2009, p. 91)

What is noteworthy is how mentoring is flexibly linked to teacher collaboration through what is known as a 'teaching-research group'. I shall discuss the topic of teacher collaboration before returning to the topic of teacher mentoring.

Teacher Collaboration Through Teaching-Research Group[1]

Teacher collaboration in Shanghai/Chinese schools primarily takes the structured forms of a 'teaching-research group' [jiaoyanzu] and 'lesson preparation group' [beikezu].

Origin and Structure

The system of organising teachers into teaching-research groups and lesson preparation groups in China originated from Russia. Implemented in China since the late 1950s, the objectives are to allow an exchange of ideas on teaching experiences, and raise the teachers' thinking, professional standard and educational quality

[1] I have translated both terms literally to preserve their meanings. For the former, I have chosen to use a hyphenated word (teaching-research) instead of 'teaching and research' to show the intrinsic link between teaching and research in this set-up. OECD (2011) translates 'jiaoyanzhu' as 'teaching-study group' (p. 88).

(Wu, 2010b).[2] Teaching-research groups bring together teachers according to the subjects they teach (e.g. mathematics teaching-research group), while lesson preparation groups bring together the same subject teachers according to the grade they teach (mathematics for primary 1).

The teaching-research groups are supported by 3 levels of teaching-research: municipal, district and school. At the municipal level is the teaching-research office, followed by the teaching-research offices in the teacher training colleges of the districts and finally the teaching-research departments in schools. Each school's teaching-research department is in charge of the teaching-research groups, and below the teaching-research groups are the lesson preparation groups. Most teaching-research groups meet once a week for about 2 or 3 periods (each period is 40 min). The meeting is incorporated into the teachers' timetables to ensure that adequate structural support is given to the teachers, to encourage them to take teaching-research activities seriously. While all schools have teaching-research groups for all subjects, not all schools have lesson preparation groups for all the grades. For example, a primary school, instead of having 5 mathematics lesson preparation groups, may have only 2: one for lower primary and another for upper primary. Given the overlap between teaching-research groups and lesson preparation groups, I shall use the former to include both groups throughout this book, unless otherwise stated.

Activities

Despite the hierarchy of and structure for teaching-research groups, there is a high level of flexibility for the teaching-research groups in practice. The teachers may come together to discuss their teaching experiences, share about a new theory of practice, discuss exam questions and problems encountered in teaching, share suggestions and conduct research related to teaching. 'I'll discuss with the Math teachers our plan at the start of the term and go through the mathematics concepts with them', said a mathematics teaching-research group leader, when I asked her what the main activities are. 'We also observe each other's lessons, organise public lessons, teaching-research competitions, check the assignments, review the test papers of different grades, monitor the level of difficulty of teaching, monitor the teaching situation, and see what problems teachers face', she added.

Not all activities of the teaching-research groups have to be face-to-face all the time. I know of at least one school in Shanghai that arranged for its teaching-research

[2] According to Wu (2010b), teacher-research groups and lesson preparation groups were first introduced through a 1957 document issued by the Ministry of Education. Known as 'Work regulation (draft) on research group for secondary teaching' [guanyu zhongxue jiaoxue yanjiuzu gongzuo tiaoli (caoan)], the document states that teachers should be organised into teaching-research groups. The regulation also provides details on the organising of teaching-research work, organisational leadership, etc. For example, the document states that 3 or more teachers will form a subject teaching-research group. If there are an insufficient number of teachers for one subject, the group can be formed by teachers who teach similar subjects.

group members to engage in online discussions. To encourage resource sharing, the materials and research findings of teaching-research groups are often uploaded onto the school's own staff portal for all staff to access. The teaching-research group also invites educational experts such as teaching-research officers from the district, university professors and senior teachers from another school to speak to and guide them. It is also not uncommon for teaching-research groups of various schools in the same district to come together to be trained and/or plan programmes together and exchange ideas. A principal said:

> Teacher collaboration takes place not just within the school but also across schools in the district. For example, the junior secondary year 2 teachers who'll be teaching the year 3 students in our district will meet for special topic training on schoolwork design. They will research and study in groups, with one or a few schools in charge of one topic and design the schoolwork.

It is evident that teacher collaboration through teaching-research groups is widely perceived to be beneficial for the teachers. 'Of course it's helpful', said a teacher to me. 'It promotes sharing, cooperation', she asserted. 'Your individual wisdom is limited and you need others to help you. You'll learn from others and increase your teaching quality'. Another teacher quoted a proverb 'taking what is long to make up for what is short' [quchang buduan] to illustrate how being involved in a teaching-research group is akin to the act of drawing upon the strengths of others to patch up one's deficiency. The mutual sharing of new ideas is especially important when it comes to exploring and disseminating novel concepts and practices. A teacher remarked, 'it's so easy for us to share what's good, easy to spread what's new'; another teacher noted that the joint lesson preparation carried out by his teaching-research group helps its members to introduce more lively teaching in the classroom.

A history teaching-research group leader explains how his teachers collaborated to implement a new teaching method in the school (Ying, 2009). To prepare for the adoption of the new approach, the group members met to discuss the theories of educational thinkers such as John Dewey and Tao Xingzhi. They invited experts from the teacher training universities, district teaching-research officers and others to speak at forums, participate in the group's activities and share their research and ideas with the group members. The group also conducted many 'daily lessons' and 'public lessons' at the school, district and interdistrict levels. The teachers filmed their own classroom teaching for analysis and carried out lesson topic research at the school and district levels. All these efforts resulted in the group compiling its findings in a book form published by the prestigious Beijing Normal University Press after 2 and a half years; members of the teaching-research group also won several awards such as the first prize in the '2007 Shanghai history exam question competition' and '2008 district history subject leader' (for an example of the discussion that takes place in a teaching-research group, see Anon, 2010b).

What motivated the teachers in Shanghai to be generally active in their teaching-research group and willing to share their ideas and resources with others? Among the reasons are two control mechanisms found in all Shanghai schools: the teacher professional development plan and the teacher appraisal system. The school-based teacher training plan makes it mandatory for teachers to be trained through their involvement in their teaching-research groups. Likewise, the teacher appraisal system

assesses, among other things, a teacher's individual contributions to the teaching-research group as well as the achievements of the teaching-research group as a whole. A principal said, 'the teacher appraisal and rewards look not just at an individual teacher's performance but also the average students' results in each grade, which the lesson preparation group is responsible for'. The various disciplinary measures ensure that the teachers contribute to, and benefit from, teacher collaboration (I will provide more details in Chap. 18.).

My Observations of a Teaching-Research Group and a Lesson Preparation Group

I observed a teaching-research group and a lesson preparation group in action in May 2011. It was a physics teaching-research group comprising 5 teachers teaching physics at the senior secondary level. The meeting objectives were to share their teaching experiences and challenges and to discuss the launch of a new research project. The leader led the meeting by highlighting a difficult physics question, explained how she taught it and asked the rest for their views. The leader reminded the group to teach physics in a more lively way and to reduce the schoolwork burden of students under the new curriculum reform. She also announced that the group would embark on an action research project focusing on a 'learning case study' for 2 years. One teacher was assigned to prepare the report for the research project, and the leader volunteered to conduct a public lesson (I shall return to the topic of 'public lesson' in the next section.).

What I observed was that the teachers were forthcoming and enthusiastic in sharing their views. The discussion was marked by seriousness and politeness with the teachers addressing one other as 'Teacher so-and-so' (recall my point about the positive connotation of the term 'teacher' in the Chinese context; see Chap. 3 for details). The teaching-research group serves to ensure the physics teachers' compliance with the current curriculum reform on student-centric lessons. At the same time, it lightens the teachers' workload by distributing it among the members and gives them support by providing them an avenue to share their teaching experiences and strategies.

The Chinese language lesson preparation group for junior years 1 and 2 comprised 3 teachers. A teacher shared how she intended to teach a Chinese classical poem and showed her teaching materials and questions to the rest. The other teachers actively responded by commenting and sharing their perspectives, experiences, ideas and teaching methods. What stood out for me was the teachers' mastery grasp of content knowledge that was demonstrated in their in-depth exposition of the poem. Listening to them reminds me of a symposium where scholars come together to analyse esoteric concepts! I was also impressed by the fact that the teachers came up with their own questions for the students based on the poem and not relied on the textbook questions. Their questions were designed to meet the specific learning needs of their students and teaching objectives of the teacher. Such a time-consuming endeavour is almost impossible if a teacher were to work alone. Involvement in a lesson preparation group therefore enables a teacher, especially a novice teacher, to learn a lot and get help from others within a short time.

Teacher Collaboration Through Lesson Observation

An important component of teacher collaboration is lesson observation by fellow teachers, experts or even the public. This is an outstanding feature of Shanghai/Chinese teaching. In some societies such as Singapore, teachers tend to be self-conscious and protective of their classroom teaching and reluctant for other teachers to observe their lessons. Often, being observed by another person means that you are being judged; this may lead to the observer feeling superior and critical and the one being observed feeling vulnerable and defensive. 'Singapore is more influenced by Western culture, because Westerners emphasise individual character, privacy, individualism', a school principal told me. 'For mainland Chinese', he added, 'we're strong in collective spirit'. In other words, there is a *culture* of teachers observing one another's lessons in a meaningful and constructive way in Shanghai/China.

That Shanghai schools have a culture of lesson observation is due to structural, pragmatic and sociocultural reasons. An important feature of education in Shanghai is that peer lesson observation is institutionalised in almost all schools in Shanghai. There is an array of lessons to be observed in a typical school. Schools have classified lessons into different types, such as 'home-made lessons' [jiachangke], which are regular lessons that are not prepared for the purpose of peer observation; 'public lessons' [gongkaike] which are lessons specially prepared for observation by fellow teachers from one's school or other schools, educational experts and/or the general public; 'young teacher's lessons'; 'subject leader's demonstration lessons'; and 'famous teacher's demonstration lessons'. Some lesson observations are accompanied by a lesson critique after the lesson observation. Besides the different types of lessons, there are also different levels of lessons to be observed: the school, district or national levels. Accompanying the lesson observations are an assortment of lesson competitions at all levels for teachers to demonstrate the their teaching abilities.

Structurally, almost schools expect their young teachers (those below 35 years old) to give at least one 'public lesson' [gongkaike] per school term as part of their teacher appraisal. Such a lesson is basically a demonstration lesson for other colleagues, one's superiors or even the public to observe and comment on. All school-based teacher professional development plans also require teachers to observe and give lessons on a regular basis. Teachers are expected to submit and upload relevant materials such as a lesson plan (for the teacher giving the lesson) and reflections (for the observers) onto the school portal using the school's prescribed templates. Some schools go a step further to institutionalise lesson observation. For example, one school in Shanghai implemented an 'open-day system' [kaifangri zhidu] where all the lessons on that day are open to not just peer observation but observation by the parents and other members of the public (Wu, Zhang, & Tian, 2009).

The structural provision makes it easy for Chinese teachers to accept lesson observation and critique. 'In the first year, you may feel uncomfortable', said a novice teacher. 'But after more times, you realise that it's part of growing up', she added, 'you've to go through it, and accept it, and you'll not feel nervous anymore.'

Photo 17.1 Behind this mirror is a hidden room for teachers to observe the lesson unobtrusively (see Photo 17.2)

Photo 17.2 This is the hidden room behind the mirror shown on Photo 17.1

Pragmatically, most teachers especially the beginning teachers are positive towards peer lesson observation. They especially value observation and critique by the more-experienced teachers as they see it as avenues for them to improve. A teacher told me that 'many of us agree that our lessons can be much improved upon after listening to the suggestions of more experienced teachers, so we don't mind being observed as it's helpful to us'. Even the more senior teachers are positive

about lesson observation as they see it as an opportunity for them to test out their ideas before they conduct a public lesson where they will be observed by more people. Without peer feedback, in the image-rich words of a principal, 'you've no mirror, you can't see your blind spot'. Agreeing with him, an experienced teacher said:

> When I have to give a public lesson, I need to 'trial speak' first. For example, if I need to give a public lesson at class A, I'll test it in class B, class C. After each trial lesson, my colleagues will give their comments, and I'll revise it, and try it on another class.

Some schools also use lesson observations as part of a collective research project. This requires teaching-research groups to carry out more than one round of lesson observation, critique and improvement based on the same theme or topic (this strategy is also used in the Post-tea house teaching approach; see Chap.15 for details.). The dean of academic affairs of a school said:

> Our school has a teaching theme for every school term. Based on the school theme, we'll choose 2 teachers from every teaching-research group to give a public lesson each. All the teaching-research groups will observe and discuss about the lesson, and the teachers will revise the lesson. The teachers will conduct another public lesson and all the teaching-research group members will observe and critique the lesson again, and highlight its strengths and weak points. All these will increase teaching effectiveness.

Socioculturally, Shanghai teachers have been socialised into an environment where they are used to observing other teachers' lessons and being observed. A teacher said, 'We've "random lesson observation" [suitang tingke], so if the principal or a head wants to observe a lesson, she doesn't need to inform the teacher beforehand, she'll just say, "Teacher Zhen, today I'll observe your third period"'. They are also used to giving and receiving feedback in a culturally appropriate manner. It is telling that many teachers still address one another as 'Teacher so-and-so' out of a sense of mutual respect. Furthermore, there is a shared understanding that the focus is on the lesson rather than the person giving the lesson. 'The mindset is that we're raising the suggestion for your own good', explained a teacher. 'It's not to attack you because whatever we say, it's for your improvement, such as how this section is not well-managed, or this material is not well-selected and can be changed, or how to revise the lesson objectives to align them better with the activities'.

Another cultural script shared by the Shanghai teachers is that they should be of equal status during the peer lesson observation. A vice-principal who is the leader of a teaching-research group said:

> Today I'm not her [the teacher who was observed] principal but her peer, because we're all from the same lesson preparation group. We discuss the lesson, because the purpose of education is to research. And research means not you're not automatically correct just because you raise a point. You can be wrong too. So we need to discuss and learn together.

A beginning teacher (she has taught for less than 2 years) reiterated the idea of equality in lesson observation. She told me that even junior teachers like she could critique the more-experienced teachers. The crucial element, she added, was to give your feedback in diplomatic way, such as 'I've this thinking, do you think it's

feasible …?' However, it should be noted that most of the feedback, especially on weaknesses and areas for improvements, tend to come from the older teachers. This is due to 2 main reasons. First, the older teachers are generally more experienced and skilful and hence are more capable than younger teachers of identifying the weaknesses and areas of improvement. The second reason is that the Confucian value of social hierarchy and respect for seniority makes it challenging for the more junior teachers to correct their older and more senior colleagues.[3]

To illustrate how lesson critique is done in Shanghai, I have reproduced excerpts of a lesson critique from a school. The public lesson was part of 12 public lessons conducted by the teachers in 2010. The lesson observed was an English language lesson on 'Revision – The Infinitive' conducted by Teacher Gu. Below are extracts of a verbatim record of lesson critiques from 3 reviewers of the school (Jinrichuneng, 2011, p. 3):

- *Reviewer 1*: Teacher Gu's lesson revolves around the infinitive, with a clear objective, is systematic, moving from shallow to deep, with good revision effect. … The teacher even taught the students how to memorise its application, designed different types of practice questions, and gave clues in the questions based on the students' learning levels, to give students a sense of achievement. I suggest Teacher Gu approach the topic of the infinitive from the perspective of forming sentences, for students to learn not just the infinitive but also the sentence construction. This may help them to memorise its usage based on such a foundation, and not just to learn by rote. The teacher could also elaborate on the difference between 'to do' and 'doing' in the teaching.
- *Reviewer 2*: Teacher Gu's lesson has a clear objective, that is to revise the infinitive, and has designed a series of sequential activities to revise and assess the students' level of mastery. First, the use of a text from Rowling's Harry Potter to introduce the lesson aroused the students' interest. … The teacher divided the infinitive into 5 categories in which students must answer questions; as such a design may be difficult for some students, is it possible to consider including some infinitives that students tend to make mistakes in, so that the students can comprehend and master them better.
- *Reviewer 3*: The entire lesson has a clear objective and the teaching design closely revolves around the objective. … The teacher appropriately used teaching aids such as multi-media tools to increase the students' learning interest and increase the volume of knowledge taught during the lesson. I suggest that this lesson include the teacher's explanation of the function of the infinitives in sentences under appropriate language environment. This will prevent the students from thinking and practising mechanically.

[3] Tian (2011), in her research of 3 schools in Shanghai, notes that some novice teachers feel uncomfortable leading, challenging or criticising their senior colleagues. She concludes that distributed leadership bears the 'Chinese characteristics' of staff cooperation that is underpinned by the Confucian values of reciprocity and seniority (p. 28). Wang (2002) also avers that teacher mentoring may prevent the novice teachers from learning to question the existing assumptions of knowledge and teaching (p. 367). The challenges mentioned by Tian and Wang remind us that cultural scripts bring with them not just positive effects but tensions, issues and problems too.

We can observe that the reviewers make a constructive effort to point out both the strengths of and areas of improvement for the lesson. Their focus is on the lesson rather than on the teacher, and they maintain the use of respectful language throughout the lesson critique, including addressing the teacher as 'Teacher Gu' and using expressions like 'I suggest ...' and 'Is it posssible …'. That the school makes the effort to record the lesson critiques and reproduce them in its school newsletter further shows the importance Shanghai schools accord to lesson observation and critique.

Back to Teacher Mentoring

Teacher mentoring is closely linked to and often takes place through the activities of the teaching-research group. One school in Shanghai, for example, does both by helping new teachers prepare their public lessons:

> In giving a public lesson, the young teacher will first prepare and conduct the lesson, ask his or her mentor to review it, and then conduct the lesson again. The teaching-research group will then discuss, revise it and she will conduct the lesson again. After 3 or 4 rounds, the new teacher will be well trained in the basics of lesson teaching. (Wu, Zhang & Tian, 2009, p. 82)

Teacher mentoring also takes place within the teaching-research group when the senior teachers guide the junior teachers in various teaching-research activities. Besides mentoring for new teachers, there are other types of mentoring, such as 'gugan teacher mentoring'. Gugan or backbone teachers are experienced teachers comprising about 30% of the teaching force and are usually above 30 years old:

There is also principal mentoring such as the 'Shanghai training project for famous principals' [Shanghaishi mingxiaozhang peixun gongcheng] where well-known principals mentor a small group of young principals. A mentoring principal shares that 'besides official ways such as listening to reports, visits, expeditions, discussions etc., I have appointments with the principal I mentor every Thursday in my study room at home for about 3 hours of dialogue … for her to obtain explicit and implicit knowledge of her work responsibilities and gain the experience to guide her in her work (Zhang, 2008a, p. 305).

A school in Shanghai even creatively combines teacher mentoring and teaching-research group through 'group mentoring' [tuandui daijiao]. Meant for beginning teachers with between 1 and 5 years of teaching experience, group mentoring is carried out as follows (Liu, 2010, p. 58):

- In the first year, an experienced older teacher from the teaching-research group will mentor the young teacher.
- In the second year, the lesson preparation group's gugan teachers will take over.
- In the third year, the teaching-research group's gugan teachers will take over.
- In the fourth year, the teaching-research group's gugan teachers from different schools will take over.

- In the fifth year, a mentor from the district's 'Famous Teacher Studio' or an expert from an educational development research centre will take over.

The mentoring for each stage involves lesson observations and critiques, as well as many other related activities.

Conclusions

This chapter discussed how Shanghai teachers constantly and systematically improve their teaching through teacher mentoring and collaboration. It is evident that teaching-research group, teacher mentoring and lesson observation complement and fortify one another. Together, the above 3 platforms contribute towards a mastery of the subject content for Shanghai teachers which in turn contribute towards Shanghai students possessing a high competency in reading, mathematics and science.[4]

It can be observed that teacher collaboration and mentoring in Shanghai manifest 3 Chinese characteristics. First, there is a clear structural and formal framework for teacher collaboration and mentoring, such as the incorporation of teacher-research group activities into the teachers' timetables, giving teaching-research group leaders extra pay for performing their duties and expecting mentoring teachers to submit their mentoring plan and completion report. 'China's special characteristic is that it has an organisation [zuzhi] to ensure that things run smoothly', a teacher told me.

Secondly, there exists the ideology of collectivism among the Chinese that is related to the presence of centralised control and management. This makes it easy for the Shanghai teachers to collaborate in groups and share resources and ideas. Foreigners should not underestimate the pervasiveness of collectivism in the daily lives of the mainland Chinese. My ignorance has led to some initial perplexity and amusement on my part when I taught the school leaders from China. There were a number of instances where I thought I was engaged in a private conversation with a Chinese school leader in a quiet corner on campus. Other Chinese school

[4] Wang (2002) asserts that teachers in China have developed a more sophisticated understanding and more flexible representations of school mathematics than their US counterparts because of their 'intensive study of mandated curriculum' and greater amounts of time spent planning lessons together with their peers, as well as 'observing and reflecting on each other's methods of instruction' (p. 344). Of course, the actual effectiveness of the teaching-research group, teacher mentoring and lesson observation varies from school to school. Some Shanghai educators have pointed out to me instances where the teaching-research group activities are formalistic and superficial, where teacher mentoring is unsatisfactory for the mentee as the mentor is unwilling to impart his or her knowledge for fear of being overtaken by a young upstart, and where lesson observations are largely reduced to performances and showmanship. But the point here is that the structural provision for teacher collaboration and teacher mentoring in Shanghai/China provides a potentially conducive and efficacious means for teacher growth.

leaders who happened to spot us from afar would not think twice about walking over and standing next to us to listen in to our 'private' conversation. That would often leave me feeling awkward and unsure of whether to continue the conversation or ask the rest to excuse us. I have since realised that this is a common behaviour among the Chinese. It demonstrates a collective mentality and a corresponding acceptance of public accountability and a lack of private space.

Thirdly, the value of collectivism is strengthened by the web of 'guanxi' [literally 'relation'] – personal connections that an individual in China may draw upon to secure resources and advantages at work and in the course of social life (Law, 2009, pp. 306–307). Guanxi resembles but is not identical with Bourdieu's concept of 'social capital', defined as 'the aggregate of the actual or potential resources which are linked to possession of durable network of more of less institutionalised relationships of mutual acquaintance and recognition' (Bourdieu, 1986, pp. 248–249, cited in Gold, Guthrie, & Wank, 2002a, p. 7).

From my observation and experience, guanxi in Shanghai offers two main benefits to the Chinese educators. First, Shanghai teachers are pragmatically aware that they need to cultivate and maintain guanxi with their colleagues, superiors and practically anyone who has the authority to allocate opportunities and help them gain access to the allocators and even with potential spoilers who could otherwise ruin one's career changes in the workplace (Lin, 2002, p. 64). The very nature of guanxi as an extensive web of social relationships means that no teacher could afford to offend anyone in the tight educational circle in Shanghai. The effects of guanxi serve as a strong motivation for the teachers to collaborate with others through teaching-research groups, lesson preparation groups, mentoring programmes and other school-, district- and municipal-level activities.

But guanxi is not just about material gains and self-interest. The second benefit of guanxi is that it adds an element of humanity, warmth, mutual care and obligation to otherwise cold transactions in the workplace (Gold et al., 2002a, p. 10). I often observed a strong camaraderie and trust among the Shanghai educators, especially if they have something that emotionally binds them, such as coming from the same school or district. Guanxi is the glue for the Chinese to learn how to relate to and treat other people appropriately and, in the process, form their individual identity and sense of fulfilment. Undergirded by the cultural script of guanxi, teacher collaboration and mentoring in Shanghai is likely to go beyond superficial implementation to one that is based on genuine albeit differentially categorised social relationships. In short, guanxi ensures that relationships between the school administrators and staff as well as among staff in the school are marked by a calibrated exchange of information, trust, respect, loyalty and negotiation (Law, 2009, p. 316).[5]

In conclusion, we see that teacher mentoring and collaboration in Shanghai are undergirded by the traditional Chinese concept of master-disciple relationship.

[5] For further reading on guanxi, see Chang and Holt (1991); Delany and Paine (1991); Tsui and Farh (1997); Hwang (1997–1998); Lou (1999); Gold et al. (2002b); and Chou, Cheng, Huang, and Cheng (2006).

The curriculum reform calls for a radical shift towards quality-oriented education serves as a strong impetus for all teachers, young and old, to explore new educational ideas and practices with and learn from their colleagues. The beginning teacher, like Po in the movie, comes under the tutelage of a master and derives assistance from his or her peers.[6] And like Master Shifu in the movie *Kung Fu Panda*, the 'Shanghai kung fu master' is a master who is ready to train the disciple so as to improve his or her 'inner strength' [neigong].

References

Anon. (2010b). Yuwenzhu jiaoyan huodong shilu – 2006 nian qiuji gaokao yuwen shanghaijuan yanjiu yu jiaoliu [Verbatim record of teaching research activity for language group – research and exchange on 2006 Shanghai senior secondary language exam paper for fall season]. In Q. Tang (Ed.) (2010). *'Jiaoxue, keyan, peixun' sanwei yiti xiaoben yanxiu kechenghua de shijian yanjiu* [Practical research for school-based training curriculum based on three-in-one form of 'teaching, subject research, training'] (pp. 118–125). Shanghai: Shanghai University of Finance and Economics Press.

Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *The handbook of theory and research for the sociology of education* (pp. 241–258). New York: Greenwood.

Chang, H.-C., & Holt, G. R. (1991). More than relationship: Chinese interaction and the principle of *kuan-hsi*. *Communication Quarterly, 39*(3), 251–271.

Chou, L.-F., Cheng, B.-S., Huang, M.-P., & Cheng, H.-Y. (2006). Guanxi networks and members' effectiveness in Chinese work teams: Mediating effects of trust networks. *Asian Journal of Social Psychology, 9*(2), 79–95.

Delany, B., & Paine, W. L. (1991). Shifting patterns of authority in Chinese schools. *Comparative Education Review, 35*(1), 23–43.

Gold, T., Guthrie, D., & Wank, D. (2002a). An introduction to the study of *guanxi*. In T. Gold, D. Guthrie, & D. Wank (Eds.), *Social connections in China: Institutions, culture, and the changing nature of guanxi* (pp. 3–20). Cambridge: Cambridge University Press.

Gold, T., Guthrie, D., & Wank, D. (Eds.). (2002b). *Social connections in China: Institutions, culture, and the changing nature of guanxi*. Cambridge: Cambridge University Press.

Hwang, K.-K. (1997–8). Guanxi and mientze: Conflict resolution in Chinese society. *Intercultural Communication Studies, 7*(1), 17–38.

Jinrichuneng. (2011, January). *Jingxuan youhua tigao* [Special selection, optimisation, improvement], p. 3.

Law, W.-W. (2009), Culture and school leadership in China: Exploring school leaders' views of relationship- and rule-based governance. In A. W. Wiseman (Ed.), *Educational leadership: Global contexts and international comparisons: Vol. 11. International perspectives on education and society*. doi: 10.1108/S1479-3679(2009)0000011013

Li, J. (2009). Learning to self-perfect: Chinese beliefs about learning. In C. K. K. Chan & N. Rao (Eds.), *Revisiting the Chinese learner: Changing contexts, changing education* (pp. 35–69). Hong Kong: Springer and Comparative Education Research Centre, University of Hong Kong.

[6] Wang (2002) points out that the teacher mentoring programme in China traditionally provides a novice teacher the necessary time and opportunities to develop a deeper knowledge of the structure of the school and its methods of promoting student learning. Also see Wang (2001).

Lin, Y. (2002). Beyond dyadic social exchange: *Guanxi* and third-party effects. In T. Gold, D. Guthrie, & D. Wank (Eds.), *Social connections in China: Institutions, culture, and the changing nature of guanxi* (pp. 57–74). Cambridge: Cambridge University Press.

Liu, Y. (2010). *Jiaoshi zhuanye fazhan jiaoben pingtai de goujian ji yunxing jizhi de yanjiu* [Research on the building and implementation mechanism of school-based platform for teacher professional development]. Unpublished master's dissertation, National Institute of Education, Nanyang Technological University.

Lou, W. (1999). *Stress and mental health of secondary school students in Shanghai: The effects of collectivism and Guanxi.* Doctoral dissertation, The University of Hong Kong. http://hdl.handle.net/10722/32195. Accessed 12 Jan 2012.

OECD [Organisation for Economic Co-operation and Development]. (2011). *Lessons from PISA for the United States. Strong performers and successful reformers in education*. http://dx.doi.org/10.1787/9789264096660-en. Accessed 12 Jan 2012.

Thompson, S. C., Gregg, L., & Niska, J. M. (2004). Professional learning communities, leadership, and student learning. *Research in Middle Level Education Online, 28*(1), 1–15.

Tsui, S. A., & Farh, J.-L. L. (1997). Where guanxi matters: Relational demography and guanxi in the Chinese context. *Work and Occupations, 24*(1), 56–79.

Wang, J. (2001). Contexts of mentoring and opportunities for learning to teach: A comparative study of mentoring practice. *Teaching and Teacher Education, 17*(1), 51–73.

Wang, J. (2002). Learning to teach with mentors in contrived contexts of curriculum and teaching organisation: Experiences of two Chinese novice teachers and their mentors. *Journal of In-Service Education, 28*(2), 339–374.

Wu, F. (2010b). *Peiyang xuexiao zuoyue jiaoshi tuandui de lujing yu celue* [Path and strategy to nurture the school's excellent teaching force: practical exploration using the Chemistry's teaching research group in Qingpu gaoji zhongxue as an example]. Unpublished master's dissertation, National Institute of Education, Nanyang Technological University.

Wu, G., Zhang, C., & Tian, L. (Eds.). (2009). *Kecheng lingdao yu xiaoben chuangxing: jiedu shanghai-shi jinganqu xueyuan fushu xuexiao* [Curriculum leadership and school-based innovation: Interpreting Shanghai Jingan Education College Affiliated School]. Shanghai: East China Normal University Press.

Ying, B. (2009). Lishi jiaoyahzhu shishi 'duihuaxing' xiaoyuan wenhua jianshe de zhongjie [Conclusion of the implementation of 'dialogue style' for building of school culture by the history teaching research group]. *Kegai tanjiu*, October issue, 69–72.

Zhang, R. (2008a). *Jujiao youxiao jiaoyu de shinian* [Ten years of focused and effective education]. Beijing: People's Education Press.

Chapter 18
Developing (f)or Appraising: School-Based Teacher Training

I think for a teacher to grow, participation in such a competition is very helpful for his or her learning. – A Shanghai teacher

Our greatest pressure is that participating in competitions is too easily linked to teacher appraisal, performance and salary. – A Shanghai teacher

A Shanghai teacher I interviewed uttered the first quote. She is a senior-grade teacher who had recently won a national teaching competition. The second quote, also uttered by a Shanghai teacher, came from a municipal survey on the state of happiness of secondary and primary school teachers (Zhongxiaoxue jiaoshi xinfugan diaocha jieguo shenyou, kaohe fanduo yali da, 2011). The two quotes highlight the reality that teacher competition is a means of growth *and* source of pressure for teachers in Shanghai. Teacher competition, as well as other activities such as conducting research and giving public lessons, is part and parcel of a teacher's work in Shanghai. They are stipulated in the school-based teacher professional development plans as well as in the teacher appraisal system. Consequently, no Shanghai teacher can afford to ignore them or take them lightly. How teacher professional development and teacher appraisal coexist and blend together seamlessly to result in a highly driven teaching force in Shanghai is the topic of this chapter.

Teacher Professional Development

As mentioned in the previous chapter, Shanghai's teachers are given numerous opportunities and much support in teacher professional development by the Shanghai authorities at the municipal and district levels (see Chap. 12). All teachers have to fulfil a minimum of 240 h (24 credits) within 5 years; senior-grade teachers have to fulfil another 300 h (30 credits). At least half of the training is school-based. To illustrate school-based training in Shanghai schools, 2 examples taken from 2 schools will be given.

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_18,

First example

The first example is taken from a senior secondary school in a district in Shanghai. The requirement from the Shanghai Municipality Education Commission is for schools to organise training sessions to fulfil at least half of the required training hours. This district gives schools in the district greater autonomy by allocating 15 credits out of 24 credits for school-based training. This means the district training institutes will only offer courses that make up 9 out of 24 credits for the teachers. The respective schools therefore play a major role in training their own teachers. Table 18.1 presents the school-based teacher professional development of a school.

We can see from the table that the teacher professional development covers many essential aspects of teaching such as subject knowledge and research, lesson planning and delivery, teacher mentoring and collaboration. Credits are even given for reading – a luxury for many teachers who are often hard-pressed for time! The emphasis on reading professional and academic books signifies the sociocultural expectation of teachers as scholars and researchers, and not just transmitters of content knowledge. Each item is allocated specific credits and the completion needs to be checked and approved before the credits are given. The plan is designed in such a way that it 'compels' all teachers to take part in all the categories or risk not having earned enough credits.

As mentioned in Chap. 12, teachers who fail to chalk up at least 24 credits over the 5-year period may not have their employment renewed. A teacher who merely aims to do the minimum and avoids giving a public lesson, for example, will find himself or herself losing out compared to other teachers. Furthermore, the plan is designed to motivate and pressure teachers to go beyond the minimum by setting their own targets and decide, for example, if they wish to give a public lesson at the municipal level (10 credits) instead of the group level (2 credits). That school-based teacher professional development plan aims to motivate and differentiate teachers is seen in the second example.

Second Example

The second example is taken from another secondary school in another district in Shanghai (Liu, 2010). Unlike the first school, this school plans half of the 24 credits or 12 credits for the teachers over 5 years. This means that every teacher needs to chalk up about 2.4 credits per year. The school's plan is shown in Table 18.2 below.

The implementation of the plan is as follows. Every teacher will apply for his or her credits to be counted at the end of every school term. The credits awarded for 'preparing a personal plan' is only counted once in the entire 5 years. The school's relevant department will inspect the materials, and the inspection officer will determine the credits the teacher should get. It is stated that no double counting is allowed, which means that one item will be awarded the highest number of credits at only

Table 18.1 School-based teacher professional development

Type of training	Requirements
(A) Courses on teacher professionalism (total credits not specified)	3 teacher professionalism seminars or public lectures per year. Each attendance will earn the teacher 2 credits; the speaker will earn 3 credits
	Teachers are to write essays on their application of the school motto, on researching students' thinking and on students' learning method. Each essay that is approved by the training organisation will earn the teacher 1 credit
(B) Courses on academic matters for educational teaching	
(a) Subject teaching research and public lesson (20 credits)	The teaching-research group is to organise 2 subject teaching-research talks a year on 'subject reform'. The speakers can be experts from within or outside the school. If the speaker is from within the school, he or she needs to submit the text of his or her talk to the school management. Each talk attended will earn the teacher 1 credit, while the speaker will earn 3 credits
	The teaching-research groups for Chinese language, mathematics and English language should have at least 8 public lessons per school term. The other subject teaching-research groups must have at least 4 such lessons per school term
	Every level group has to have at least 4 public lessons per school term. A public lesson conducted at the group level will earn the teacher 2 credits, 4 credits if conducted at the school level, 7 credits at the district level and 10 credits at the municipal level
	The person who critiques the lesson (usually a backbone teacher) will earn between 1 credit (at the teaching-research group level) and 2 credits (at the school level). The person giving the public lesson also needs to provide the teaching materials for the lesson, teaching reflections, etc.
(b) Educational subject research theory learning and practice (20 credits)	Each school is to organise subject knowledge lectures once a year by inviting municipal and district experts or outstanding teachers from within the school to speak. Each attendee teacher will earn 2 credits, while the speaker will earn 4 credits
	Each teacher is to conduct lesson topic research, which requires an official registration. Participation at the school level will earn the teacher 2 credits, 4 credits at the district level and 8 credits at the municipal level. Additional credits will be given if the teacher wins prizes. If the research is published as a book, the teacher will earn 20 credits
(c) Exchanges on reading and reading experience (20 credits)	A school training organisation will recommend 10 books a year on educational theory, educational subject research, subject teaching, humanities, etc. The teachers can choose what books they prefer and write a reflection after reading each book. Each reflection approved by the teaching-research leader will earn the teacher 2 credits. The credits earned from this component should not exceed 4 credits per year
	The teaching-research groups are to organise a yearly forum for teachers to exchange experience gained from reading. Attendance will earn the teacher 1 credit
(d) Modern educational technology training (20 credits)	The training has 3 grades: beginner, intermediate and advanced. Each school is to organise an exhibition and competition on lesson plan design. Appropriate credits after inspection will be given.

(continued)

Table 18.1 (continued)

Type of training	Requirements
(e) Guidance from experts and assistance from peers (credits not specified)	The school is to invite current and retired senior teachers from within and outside the school, usually special-grade teachers, as well as teaching-research leaders and subject leaders to carry out lesson observation, dialogue, discussion and backbone teacher training. The ratio of mentors to mentees is usually 1:1 or 1:2. Each participating teacher will earn 2 credits
	'Master-disciple relationship'. The mentoring teacher needs to submit a wirtten mentoring plan and conclusion. The mentoring teacher will earn 4 credits a year
(f) Designing micro courses (credits not specified)	The school will invite experts to direct the school to design between three and five micro school-based training courses such as 'building teaching-research group for secondary and primary schools'. Each participating teacher will earn 3 credits

Source: Tang, 2010, pp. 33–36

Table 18.2 School-based platform for teacher professional development

Credit / Level / Item	Lesson preparation group (school level)	Teaching-research group (school level)	Educational organisations (school-organi-sational level)	District level	Municipal level	National level
Prepare a personal plan	–	1.0	–	–	–	–
Give a public lesson	0.2	0.3	0.4	0.6	1.0	2.0
Observe and critique a lesson	0.1	0.2	–	–	–	–
Participate in setting exam questions	0.2	0.3	0.6	0.8	–	–
Publish essays	0.3	0.4	0.6	0.8	1.5	2.5
Organise a forum	0.4	0.5	1.0	1.5	–	–
Research a classroom topic	–	1.0	2.0	3.0	4.0	5.0
Launch a course	–	2.0	3.0	5.0	6.0	–
Mentor a teacher	0.5	1.0	2.0	3.0	–	–

Source: Liu (2010), p. 64

one level. For example, if a teacher organises a forum at the district level, he or she will only receive 1.5 credits (district level) and not an addition of 0.5 credits (school level) even though teachers from her teaching-research group also attend it.

Again, we see how the teacher professional development plan covers a wide spectrum of activities for teachers to take part in. The credits awarded for each

activity increases as the level goes up, as it is more challenging and time-consuming to be involved in an activity at a higher level. Some activities such as research for a classroom topic and launching a course at the lesson preparation group level have not been allocated any credits, as these are basic competencies that all teachers are expected to attain. In other words, the aim is to push teachers out of their comfort zone and spur them on to take part in activities and training courses that will stretch them further. Teacher compliance is guaranteed since all teachers must chalk up 12 credits over 5 years for school-based training.

To further train teachers and make it easier for them to participate in certain activities such as giving a public lesson, the school has adopted some measures on a school-wide basis (Liu, 2010, pp. 48–49). First, it organises a 'teaching festival' where all teachers have to give public lessons in the school. New teachers (those who join the school for a month) will give an 'appearance lesson', young teachers (those who have taught for fewer than 5 years) will give a 'selection lesson' and backbone teachers will give a 'demonstration lesson'. All the teachers are made participants and have to critique one another's lessons.

Another measure taken by the school is to introduce different awards for the 'Young teachers' rating lesson'. This event is essentially a competition based on the teaching quality of young teachers. Besides giving out group awards to encourage teacher collaboration, the school also gives out individual awards such as the 'Best improvement award', 'Integration of Information technology and subject award' and 'Use of humour in classroom teaching award'. The goal of these awards is to reduce the psychological pressure from excessive formal selection processes, especially for beginning teachers. Such a measure may come as a relief to teachers such as the second teacher quoted at the start of the chapter.

Overall we could see that teachers in Shanghai are motivated to take school-based teacher training seriously because it is a vehicle for growth as well as a disciplinary mechanism. First, teachers generally value teacher professional development as the training activities such as giving public lessons are directly linked to their role as teachers. An example is a school in Shanghai that strategically links the school's public lessons to teacher professional development:

> The school also set aside 1 day a week as the school's teaching activity's open day. On this day, all the lessons are open to the public, so it is a challenge to every teacher. All the subject lessons are demonstrations. *Motivated by this pressure, the teachers actively seek personal professional development* … so as to raise their personal professional standard and ability, and gradually by conducting public lessons, more and more teachers become outstanding teachers. (Wu, Zhang & Tian, 2009, p. 93, italics added)

But teacher professional development plan is also used as a disciplinary measure. A principal of the school explained: 'We expect all teachers to participate in the lesson preparation group, in lesson critique etc. but how do we ensure that teachers complete the tasks? We chose "credit management", which uses the training hours required of all teachers by the Shanghai Municipal Education Commission' (cited in Liu, 2010, p. 63). The significance of the school-based teacher professional development plan for the teachers is further seen in its link to teacher appraisal, as the next section shall explain.

Teacher Appraisal

The teacher professional development plan is linked to and overlaps with teacher appraisal in Shanghai. In Shanghai, a teacher's pay is composed of 3 parts: job allowance, workload allowance, and performance bonus. The job allowance, which is based on the teacher's specific work title and number of years of teaching, is standardised across all schools and determined by the municipality authorities. The workload allowance is determined by the school and varies from teacher to teacher, depending on the subject taught, workload hours and other teaching responsibilities. The performance bonus is also decided by the school and is based on the performance grade the teacher obtains from teacher appraisal. Following self-appraisal, peer appraisal and appraisal by the school leaders, each teacher will be given one of the following 4 performance grades: 'excellent', 'meeting the standard', 'basically meeting the standard', and 'failing to meet the standard'. Currently, the number of teachers eligible for the 'excellent' grade is capped at 10–15% per school. Unsurprisingly, many teachers take teacher appraisal very seriously since it directly determines the amount of performance bonus they will get as well as their promotion prospects. Shanghai teachers are generally appraised based on 5 categories: morality, ability, diligence, results and honesty. Below is a typical example of a teacher's appraisal form used by a secondary school in Shanghai.

We can see that the appraisal form (Table 18.3) has a number of items that overlap with the teacher professional development plans (Tables 18.1 and 18.2). The clearest link is perhaps the criterion on 'professional development' in Table 18.3 where teachers are expected to set clear targets for their own professional development plan and be actively involved in school-based training. The criterion of 'research ability' in Table 18.3 also states that a teacher is assessed on whether he or she 'conscientiously participates in teaching-research activities at all levels, participates in lesson observation and critique; gives public lessons based on regulations and requirements, is actively involved in lesson topic research and teaching-research activities'. These same activities are also listed in the school-based teacher development plan: under 'subject teaching research and public lesson' and 'educational subject research theory learning and practice' for Table 18.1 and 'give a public lesson', 'observe and critique a lesson' and 'research a classroom topic' for Table 18.2.

Teachers are also appraised on their 'research outcome' such as obtaining 'prizes at teaching and subject-research competitions at the district level and above' and publishing 'essays on teaching reform and teaching research' (see Table 18.3). As these activities that are appraised – teaching competition, subject-research competition, essay writing, etc. – are already included in the school-based training (see Tables 18.1 and 18.2), the overlap of activities ensures that the teachers see the relevance of and therefore participate actively in teacher professional development.

Besides the teacher appraisal form that applies to all teachers, there are additional criteria that teachers need to fulfil if they desire to be promoted to the next grade. Here, the criteria are again linked to the activities in the teacher professional development plan. Teacher promotion currently involves internal assessment for all

Table 18.3 Teacher's teaching work inspection and appraisal form

Level 1 index	Level 2 index	Level 3 index
Morality	Performance of statutory duties	Loves the motherland and the Party, firmly implements the Party's education policy, teaches in accordance with the law, actively participates in political learning and school group activities
	Conduct and self-cultivation	Abides by teaching ethics, nurtures others and serves as a role model, loves and is dedicated to the profession, cares for students and respects their character, does not mete out corporal punishment or disguised corporal punishment on students
	Team spirit	Loves the group and respects peers, gives mutual assistance, exchanges and shares, actively advances, wins glory for the team, cares for the organisation, protects the school's reputation
Ability	Educational ability	Implements the 'two synopses' education (on national education and life education), emphasises the students' ideological and moral behaviour, focuses on students' psychological counselling, is adept at communicating with parents
	Teaching ability	Conscientiously develops and implements teaching plans with clear targets, carefully prepares lessons, strictly adheres to curriculum standards, seriously writes and uploads lesson plans, does a good job of accumulating teaching resources
		Focuses on the target audience in lesson delivery with correct content, highlights the important points and deals with the difficult points, interacts with students, delivers high teaching effectiveness
		Carefully designs and screens homework with a strong focus on the lesson's objectives, asks appropriate questions, is conscientious in marking and guiding
		Patiently and carefully coaches students, answers all their questions, gives differentiated instruction with equal focus on strong and weak students, raises the students' excellent rate and passing rate annually
		Is able to set exam questions at an appropriate level of difficulty yet meeting the exam requirements, strictly enforces the invigilation and marking requirements, conscientiously completes the quality analysis of student achievement statistics
	Research ability	Conscientiously participates in teaching-research activities at all levels, participates in lesson observation and critique, gives public lessons based on regulations and requirements, is actively involved in lesson topic research and teaching-research activities, emphasises teaching reflection and possesses innovative and practical ability
Diligence	Compliance and discipline	Strictly complies with the rules and regulations of the school, having no instances of teaching accidents, and no irregularities
	Work responsibility	Fulfils all duties, being committed to the profession, carries out work duties, is strict in teaching, has a strong sense of responsibility to complete all the assigned education and teaching tasks
	Workload	Accepts full teaching workload, takes the initiative to undertake and actively complete other work arranged by the school

(continued)

Table 18.3 (continued)

Level 1 index	Level 2 index	Level 3 index
Results	Educational effect	Effectively regulates student behaviour, nurtures a good class and learning atmosphere, maintains a harmonious teacher-student relationship
	Teaching quality	Delivers high teaching effectiveness; continuously raises the quality of teaching; improves the common exam results, passing rate and ranking; delivers results for expanded and inquiry courses; guides students to engage in academic competition and physical and artistic competitions; and obtains awards at the district level and above
	Research outcome	Undertakes research of lesson topics and shares experiences at the school level and above; produces research, teaching cases and teaching reflections; obtains prizes at teaching and subject-research competitions at the district level and above; publishes essays on teaching reform and teaching research
	Professional development	Sets clear targets for individual professional development plan, is actively involved in work-related education and school-based training, continuously raises one's professionalism and work ability
	Contribution to school's reputation	Contributes significantly to the establishment of projects, which focus on the school's special characteristics; assists in educational reform experiments, research projects and improvements in academic teaching quality; and receives commendation at the school level and above
Honesty	Honesty and self-discipline	Serves the students wholeheartedly, is not mindful of personal gains and losses, not self-serving, does not accept cash and gifts, does not provide paid home tuition

Source: Shanghai Shinan Secondary School (n.d.)

grades and an addition of external assessment for first-grade teachers and above. Internally, the school will form a promotion and appointment committee [pinren weiyuanhui] to review the applicant's portfolio (Law, 2009). Each portfolio should include documents such as the applicant's annual staff appraisal over the last few years, records of public lessons conducted at the school and/or local levels, sample lesson plans, one or two single-authored publications on teaching or education reform and evidence of research achievements such as awards at the school level and above. For external assessment, the applicant has to pass the internal assessment first before being assessed by relevant subject-specific assessment panel members from the education bureau. The panel members will not only assess his or her portfolio and refer to the school's recommendations but also observe his or her lessons in school (Law, 2009). For a useful reading of teacher appraisal in 3 Shanghai schools, see Zhang, 2008b).

A school principal explained to me the effect of teacher professional development and teacher appraisal/promotion on teachers' behaviour:

> There's a management mode based on work titles, for example, you're a first-, second- or third-grade teacher. For every grade, there're targets to be met, such as giving public lessons

and publishing essays. If you do not conduct a public lesson, then you don't qualify to apply for the next grade.

The consequence is that it is difficult to separate the activities that fall under the teacher development plans from the activities used for appraisal. While the conflation can be good in that it combines appraisal and development, it can also be a source of stress as it means the teachers feel that they are constantly being watched and evaluated.

Teacher Competition

As mentioned, a criterion for teacher appraisal is the consideration of whether a teacher has won prizes in competitions for teaching and research. Indeed, a big part of Shanghai/Chinese education revolves around teacher competition. Competition serves the dual function of training teachers as well as appraising them. It is also perceived to be a fair method to screen and reward deserving individuals for their teaching efforts. I have elsewhere discussed the historical and cultural factors in China that favour competition through various types of assessments (see Chap. 10). This section briefly discusses the Chinese characteristic of teacher competition and its relation to teachers' professional development and appraisal.

Visit any homepage, read any school newsletter or walk along the corridor of any Shanghai school, and you will find the school publicising a smorgasbord of school, staff and student awards it has won from various competitions.[1] In my visits to schools, I also observed that the principals would invariably highlight the school's awards and even make a special effort to introduce the award-winning teachers to me. I came across a newsletter of a school that announced that 28 out of 110 teachers from the school had won awards in 2010. Apparently, this achievement is not uncommon for schools in Shanghai, since they could compete for a wide variety of awards from many organisations at the school, district, municipal and national levels. Some of the awards and awarding agencies in Shanghai are:

- 'Excellent Teacher Award from Affiliated Schools of East China Normal University' by East China Normal University
- 'Practice and Research in Chinese Education' by Chinese Education Association
- 'Administrative Award, Excellent Assessment' by Pudong New District Education Bureau

[1] Cheng and Wong (1996) link the pervasive spirit of competition to the impressive performance of East Asian students in international competitions. They assert: 'The spirit of competition infiltrates the interrelations between students, teachers, classes and schools. As such, it is not surprising that East Asian students perform better in international comparisons and competitions. They are trained to do that, which is fundamental to the school system' (p. 45).

- '2010 National Excellent Lesson Selection for Ideology and Morality, Ideology and Politics' by Moral Education Research Branch Association of the Chinese Education Association and Secondary Politics Academic Commission

Photo 18.1 A school poster displaying profiles of its award-winning teachers

The higher the level of competition (especially at the municipal or national level), the more competitive it is and of course the more prestigious it is. Teachers who have won competitions can expect to earn more credits under the teacher professional development plan as well as higher scores for their appraisal. Among the awards, the 4 highly coveted awards at the municipal level are as follows (Ying, 2011, pp. 10–13):

- 'Teaching Selection for Young Teachers in Shanghai Secondary and Primary Schools'
- 'Teaching Research Lesson Topic Result Selection for Young Teachers in Shanghai Secondary and Primary Schools'
- 'Thesis Selection for Shanghai Teaching Research Officers'
- 'Professional Development Selection for Shanghai Basic Education Teaching Research Officers'

I shall just briefly describe one of these awards to show its significance for Shanghai teachers. The 'Teaching Selection for Young Teachers in Shanghai

Secondary and Primary Schools' was first introduced in 1986. Viewed as an award equivalent to receiving an Olympics medal by many teachers, it is offered once every 4 years with a different subject focus each time. The subjects covered in the 2010 selection included secondary and primary school mathematics, music, art and information technology. This competition is open to teachers who have completed at least 3 years of service, aged below 45 for secondary teachers and below 40 for primary and kindergarten teachers. Participating teachers need to complete '4 ones' after choosing a teaching content: they need to write a lesson, plan, write a brief teaching explanation, conduct a lesson, and participate in an assessment to demonstrate one's professional ability. In 2010, 342 teachers participated, out of which 87 obtained first prize, 190 the second prize and 65 the third prize.

Shanghai teachers and schools take these competitions very seriously. A winner of another highly coveted award, the 'Thesis Selection for Shanghai Teaching Research Officers', shared that he prepared for the competition by 'going to various schools to listen to hundreds of lessons… and reviewing over 3 million-word literature from local and overseas sources' (Ying, 2011, p. 13). He added that he found the whole experience very educational as he managed to 'deeply consider Shanghai's English language curriculum [his subject specialisation] and teaching problems, and obtain systematic knowledge of Shanghai's key characteristics in its approach to the English language, new curriculum, design, teaching, basic effect etc' (Ying, 2011, p. 13).

Beyond the municipal level, the ultimate achievement for any Chinese teacher, of course, is to win an award at the national level. I met one such teacher who was awarded the first prize for teaching in her subject area, in the 'National Excellent Lesson Selection' in 2010. She shared with me how she had to go through many rounds of competitions in Shanghai before being selected to represent Shanghai for the national competition. Her preparation for the national competition alone took 8 months. She shared how she spent many hours, even using her vacations and weekends, to read and analyse tons of teaching materials, curriculum standards, theories and teaching designs.

But it was not a solo effort, she stressed to me. Often when a teacher qualifies to enter the finals of a prestigious competition at the district, municipal or national level, the whole school, district and even municipality would rally around the teacher to offer assistance and support. Surrounded by a sense of collectivism, many Chinese perceive the teacher's victory as bringing glory to the teacher's school, district and/or municipality. That was the experience of the winner. She told me:

> It's actually a collaborative effort, because I prepared the lesson with other teachers involved in planning the teaching materials. They included East China Normal University's professors, Shanghai municipality's teaching-research officers, my school's teaching-research group. They all helped me to demonstrate Shanghai's second curriculum reform's ideology through my lesson.

The above example illustrates, once again, the paradoxical coexistence of self-interest and collectivism – a point that was raised in our earlier chapters.

Here, we see how teacher competition both rewards individual teachers and fosters collaboration and sharing of resources.[2]

Conclusions

This chapter discussed how Shanghai schools combine teacher development and teacher appraisal in their school-based teacher training to ensure a highly competent and motivated teaching force. The school-based teacher professional development plan serves to complement the teacher professional development plans at the municipal and district levels (see Chap. 12). It is also noteworthy that the teacher training and teacher appraisal are intricately linked to the school appraisal system. I have already discussed how schools in Shanghai are appraised based on the 'school developmental supervisory appraisal' in Chap. 9. Among the criteria, a school (and by implication, the school principal) is appraised on whether it 'has clear goals for teachers' professional development, concrete measures to nurture young teachers and experienced teachers'. The school is also assessed on its 'teaching-research system for lesson preparation, lesson delivery, lesson appraisal, etc.' – this is a reference to the activities of the teaching-research groups that are included in the teacher training and appraisal as well. There is therefore a coherent and structured system in Shanghai where clear and ambitious standards and process are shared and applied across all the schools within effective accountability systems.

It is apparent that 2 major forces influence educational policymaking and its implementation in Shanghai (Law, 2009, p. 308). On the one hand, we see market values that emphasise individual effort and rewards. On the other hand, we see the influence of sociopolitical culture, namely, traditional Chinese culture such as respect for authority, collectivism and harmony.[3] Walker and Dimmock (2000), in their analysis of teacher appraisal in Chinese cultures, assert that a major difference between East Asian societies and most English-speaking Western societies is that the former elevates the place of relationships, whereas the latter elevates task and performance (p. 173). Their claim is based on the recognition that East Asian cultures are rooted in collectivist values where good relationships and interpersonal and

[2] Interestingly, even the title of a gugan teacher (backbone teacher) carries the connotation that one is both a collectivist and an individualist. Paine and Ma (1993) maintain: 'A backbone teacher represents the ideal teacher – good in their classroom teaching, but also good in that their teaching helps to foster good teaching among other teachers and improves the overall quality of education in the school. The idea of a backbone teacher also implies that one is well oriented with other teachers and is one that the teachers can relate to. At the same time, the term implies another dimension in which teachers can be differentiated'. (p. 680).

[3] Law (2009) focuses his discussion on Chinese school leadership, but I think it can also be applied to education as a whole. For further reading on Chinese leadership, see Bush and Qiang (2000) and Ribbins and Zhang (2006).

organisational harmony are preeminent considerations. However, I would argue that Shanghai does not quite fit Walker and Dimmock's description above. Teacher appraisal in Shanghai elevates task and performance, as seen in the appraisal and promotion system, but the appraisal is still grounded in relationships through teacher collaboration, mentoring and resource sharing. I do, however, agree with Walker and Dimmock on the need to acknowledge the influence of societal culture on educational practices in schools.

The twinning of the teacher development and appraisal through activities such as teacher competition is exemplified in the case of the award-winning teacher mentioned at the start of the chapter. She shared that her experience of preparing for the competition has helped her professionally. At the same time, her national award results in a very favourable appraisal for her by her school – I met her school principal, and his pride in her was palpable. But for every award-winning teacher, there are many other aspiring teachers struggling to do the same. That is why teachers such as the second teacher cited at the start of the chapter feel the constant pressure and stress to perform since the outcome will directly affect one's employment, pay, bonus and promotion prospects.[4] To put it simply, teacher professional development and teacher appraisal in Shanghai function both as a carrot and a stick.

References

Bush, T., & Qiang, H. (2000). Leadership and culture in Chinese education. *Asia Pacific Journal of Education, 20*(2), 58–68.

Cheng, K.-M., & Wong, K.-C. (1996). School effectiveness in East Asia: Concepts, origins and implications. *Journal of Educational Administration, 34*(5), 32–49.

Law, W.-W. (2009), Culture and school leadership in China: Exploring school leaders' views of relationship- and rule-based governance. In A. W. Wiseman (Ed.), *Educational leadership: Global contexts and international comparisons: Vol. 11. International perspectives on education and society*. doi: 10.1108/S1479-3679(2009)0000011013

Liu, Y. (2010). *Jiaoshi zhuanye fazhan jiaoben pingtai de goujian ji yunxing jizhi de yanjiu* [Research on the building and implementation mechanism of school-based platform for teacher professional development]. Unpublished master's dissertation, National Institute of Education, Nanyang Technological University.

Paine, L., & Ma, L. (1993). Teachers working together: A dialogue on organisational and cultural perspectives of Chinese teacher. *International Journal of Educational Research, 19*(8), 675–697.

Ribbins, P., & Zhang, J. H. (2006). Culture, societal culture and school leadership – A study of selected head teachers in rural China. *International Studies in Educational Administration, 34*(1), 71–88.

Shanghai Shinan Secondary School (n.d.). *Shanghaishi shinan zhongxue jiaoshi jiaoxue gongzuo kaohe pingjiabiao* [Shanghai Shinan Secondary School's teacher's teaching work inspection

[4] Another drawback of an overreliance on quantitative measurements and outcomes such as the number of public lessons given and awards won is that such an approach fails to adequately capture other aspects that are crucial to teacher professional development, such as a teacher's moral outlook and inner sense of professionalism.

and appraisal form]. http://shinan.hpe.cn/Upload/Content/Attach/152_634273317679883311_377687.doc. Accessed 2 Jan 2012.

Sohu (2011). Zhongxiaoxue jiaoshi xinfugan diaocha jieguo shenyou, kaohe fanduo yali da [Survey result of happiness state of secondary and primary school teachers worrying, much appraisal and great pressure]. *Jiefangwang*. http://news.sohu.com/20110907/n318656204.shtml. Accessed 10 Feb 2012.

Tang, Q. (Ed.) (2010). *'Jiaoxue, keyan, peixun' sanwei yiti xiaoben yanxiu kechenghua de shijian yanjiu* [Practical research for school-based training curriculum based on three-in-one form of 'teaching, subject research, training']. Shanghai: Shanghai University of Finance and Economics Press.

Walker, A., & Dimmock, C. (2000). One size fits all? Teacher appraisal in a Chinese culture. *Journal of Personnel Evaluation in Education, 14*(2), 155–178.

Wu, G., Zhang, C., & Tian, L. (Eds.). (2009). *Kecheng lingdao yu xiaoben chuangxing: jiedu shanghaishi jinganqu xueyuan fushu xuexiao* [Curriculum leadership and school-based innovation: Interpreting Shanghai Jingan Education College Affiliated School]. Shanghai: East China Normal University Press.

Ying, J. (2011). Tui rencai, zhu kegai, ming fangxiang – Shanghaishi jichu jiaoyu 'sixiang pingxuan' ershiyu zaijie suoguo [Promote talent, assist curriculum reform, brighten direction – more than twenty fruits from the 'four item selection' in Shanghai basic education]. *Shanghai Education, 5*(3A), 10–13.

Zhang, X. (2008b). *The role of teacher appraisal in teacher professional development: A case study in schools in Shanghai.* Doctoral dissertation, The University of Hong Kong. http://hub.hku.hk/handle/10722/51240. Accessed 12 Jan 2012.

Chapter 19
The End: Learning ABC from Shanghai

We have come to an end of our Shanghai story. I have narrated, through the various chapters, the people, policy and practices related to education in Shanghai. In this concluding chapter, I shall draw the key ideas together by returning to the concept of educational success. As mentioned in the introductory chapter, educational success can be seen from 4 main components: shared moral vision, standards and policies, school leadership and management, and teaching and learning. I shall return to the 4 research questions mentioned at the start of this book:

- What is Shanghai's shared vision on education and how does this vision contribute towards Shanghai's educational success?
- What are the standards and policies introduced by the Shanghai authorities across the educational system, and how do they help the schools fulfil the shared vision?
- How do Shanghai schools allocate resources, organise work, conduct field-based research that inform practice, and invest in teacher training and collaboration to fulfil the shared vision?
- How do Shanghai schools deliver high-quality teaching and learning, and promote complex and higher-order thinking consistently to fulfil the shared vision?

The 4 Components of Education Success

Shanghai's Shared Vision on Education

A Shanghai teacher: 'It's important not to allow any student to be left behind. It's important to ensure that all students have the essential knowledge points'.

An important factor for Shanghai's educational success is its shared vision on valuing education and on developing every child. As mentioned in various chapters, this vision stems from sociocultural and historical reasons. The Confucian value of scholarship and the implementation of the imperial exams in ancient China have

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6_19, © Springer Science+Business Media Dordrecht 2013

exalted academic success and link it to success in life. The high-stake exams in Shanghai, especially the gaokao, as the standardised means for admission into coveted university places, reinforce the importance of academic performance. Furthermore, there is a shared conviction that all children, regardless of hereditary factors and socioeconomic family backgrounds, can achieve success with sufficient nurturing and hard work. This cultural script originates from a Confucian belief in the potential and perfectibility of all human beings, coupled with the social pressure of having only one child per family in a highly competitive society.

Underpinned by a shared moral vision to develop every child, Shanghai's educational development is geared towards promoting educational balance and fairness. The current curriculum reform is aimed at 'developing every child' through the paradigm of a quality-oriented education. This child-centric goal makes all schools responsible for bringing out the best in every child and providing equal learning opportunities for all students. It is evident that the major educational stakeholders share this goal of valuing educational success for every (and the only) child. Shanghai principals and teachers are dedicated to their profession and skilful in implementing curriculum reforms while continuing to strive for high test scores and college entrance rates. They are supported by parents and students who similarly treasure educational excellence and are prepared to channel most of their energies to achieving that goal.

Standards and Policies

A Shanghai principal: 'The appraisal system gives schools the space to formulate and carry out their plans based on their school management ideology'.

The Shanghai Municipal Education Commission and the various district education bureaus formulate and implement clear and ambitious standards and policies to support the curriculum reform goal of quality-oriented education. The standards are manifested primarily in the school appraisal system, teacher professional development plan, and teacher appraisal and promotion system. The policies converge on achieving quality-oriented education based on a foundation of educational balance and equality. These standards and policies are aligned with high-stake gateways and instructional systems in the schools through the zhongkao, gaokao and other forms of assessments for students across the levels.

Underpinning the standards and policies is the ideology of centralised decentralism where schools are given the autonomy in school management, while the municipal and district authorities retain their central control. The dynamics of initiation, content, levels and simultaneity are evident in the curriculum, pedagogy, assessment and teacher professional development. The uniformly imposed standards and policies by the municipal and district authorities across the schools enable all students, including those from socio-economically disadvantaged backgrounds, to receive equal learning opportunities to excel.

Resources, Work, Research and Teacher Development

A Shanghai vice-principal: 'The school principal is given more autonomy to explore teaching methods. Many schools in Shanghai are emphasising their special characteristics'.
A Shanghai teacher: 'We work hard together to research and discuss how to change from traditional teaching to lively learning. There's practical value in our collaboration'.

Guided by the ideology of decentralised centralism, Shanghai educational leaders are expected to manage the schools in such a way as to improve the school performance. To promote quality-oriented education, various types of courses (foundational, expanded and inquiry/research courses) are provided for the students. Adequate and varied resources are available through the schools' network with the experts from the districts, universities and other schools. The teachers' workloads are also kept relatively light and teaching-research group activities are incorporated into the teachers' timetables to promote continuous teacher research and collaboration. Teacher training is underscored through teacher mentoring, teacher professional development at the municipal, district and school levels, teacher appraisals and competitions. In short, the Shanghai schools are run by people who are given the power and discretion to allocate resources, organise work, conduct field-based research that inform practice, invest in teacher training and collaborate to improve school performance with effective accountability system.

Teaching, Learning and Thinking

A Shanghai teacher: 'I think Western countries emphasise experiential teaching. Here in Shanghai, we're effectively combining the theory and knowledge with practice'.
A Shanghai student: 'We start learning from a young age, we've a good foundation in theory. And practise, remember what you've practised'.

Shanghai teachers stand out as content experts who excel in transmitting foundational knowledge and skills to their students while promoting critical thinking that emphasises logical and inferential processes. While introducing innovative and student-centred activities, they retain Chinese-style teaching methods that emphasise teacher domination, classroom discipline, exam techniques and the assignment of homework. Examples of innovative teaching approaches infused with Chinese characteristics are dialogue style teaching and the post-tea house teaching approach. Similarly, Shanghai students are generally highly motivated and extremely diligent in learning and completing their homework. We also must not forget the role of non-formal avenues for education – individuals and organisations outside the school system that provide private tuition and enrichment courses. All the factors above work together to ensure that consistently high-quality teaching and learning are present to enable students from across the education system to benefit from excellent learning opportunities.

The nature of teaching, when examined in the light of the moral vision and high leadership standards of the Shanghai educational authorities, points to the professionalism, structural support, strong teacher training and quality teaching of the Shanghai teachers. Likewise, the nature of learning is closely linked to the moral vision of the societal and familial aspiration for schooling excellence in a highly competitive society.

International Implications: What Can We Learn From Shanghai?

I would like to answer the question mentioned in the sub-heading above by referring to a broader question. Posing the question 'What we should and should not learn from the Japanese and other East Asian education systems', Jeynes (2008) identifies 2 main schools of thought:

- Those who believe that East Asian systems are so culturally distinct that learning from them is a near-futile exercise
- Those who believe in learning from East Asian systems on the basis that East Asia's success was attained by learning lessons from the West which the West itself had forgotten (p. 907)

With reference to the first position, I agree that East Asian systems *are* culturally distinct and we should not be too quick to draw lessons from them. It may be tempting for policymakers and educators from outside China to simply borrow education policies from Shanghai for their own education systems. But policy borrowing is neither straightforward nor easy since cultural scripts inevitably mediate policy conception and implementation. As mentioned, a cultural script is a coherent and evolving set of cultural beliefs and assumptions located within a particular tradition that undergird the vision and purposes of a society. The dynamic and unpredictable interplay between the global form and cultural scripts results in the former reconstituting and recontextualising itself for assimilation into the new local environment. To illustrate the powerful role of cultural scripts in interpreting and shaping education policy, I shall focus on the topic of *performativity* in education.

Policymakers and educators across countries, in their attempts to reform their educational systems so as to increase the test scores of students, struggle with the problem of performativity (e.g. see Ball, 2000, 2003; Kamens & McNeely, 2010; Lingard, 2010; Tan, 2008b; Troman, 2008; Turner-Bisset, 2007). Performativity is 'a technology, a culture and a mode of regulation that employs judgements, comparisons and displays as means of incentive, control, attrition and change – based on rewards and sanctions (both material and symbolic)' (Ball, 2003, p. 216). The state employs monitoring systems for the school leaders and teachers through the mechanics of performativity such as league tables, the appraisal meeting, the annual review, report writing, site visits, inspections and peer reviews. Educators in schools are expected to organise themselves as a response to targets, indicators and evaluations under state regulation.

A performative culture is perceived by educators to be detrimental to education as teachers 'are no longer encouraged to have a rationale for practice, account of themselves in terms of a relationship to the meaningfulness of what they do, but are required to produce measurable and "improving" outputs and performances, what is important is what works' (Ball, 2003, p. 222). In the same vein, students (and their parents) suffer from a testing regime where the emphasis in schools is predominantly on improving the students' test scores and winning prizes and awards as 'evidence' of the students' learning, rather than on outcomes that are less or nonmeasurable such as character development.

However, it is noteworthy that Shanghai does not face the same dilemmas, challenges and problems arising from performativity as the Anglophone societies. I would like to suggest 2 main reasons to explain the situation in Shanghai. First, testing and the various mechanics of performativity are not necessarily viewed negatively in Shanghai. I have pointed out that tests and exams have a long and entrenched tradition in China. In addition, the schools in Shanghai do not fiercely resist the various monitoring systems imposed by the authorities. On the contrary, they are generally well accepted by the school leaders and teachers, given China's centuries of centralised control. In the process, the Chinese have been socialised into a culture of submission to authority and collectivism. That is why the implementation of various mechanics of performativity such as league tables, the appraisal meeting, the annual review, report writing, site visits, inspections and peer reviews do not have the same pejorative effects in Shanghai when compared to other countries especially those in the West.

In fact, many Shanghai school leaders and teachers welcome these targets, indicators and evaluations as these measurements are seen as objective and transparent means to assess and rewards schools and individuals under an effective accountability system. As noted earlier, the Shanghai educators are wary of any mode of assessment that is not standardised or measurable as this opens the door for subjective judgement and potential power abuse. They prefer clear and ambitious standards that are shared across the system and aligned with high-stake gateways and instructional systems.

Secondly, the introduction of testing and the various mechanics of performativity have not led to the teachers losing their rationale for practice and their relationship to the meaningfulness of what they do. In other words, there is no evidence of teachers in Shanghai being fixated at achieving short-term tactical measurable and 'improving' outputs and performances at the expense of their sense of professionalism and professional development. This is because there exists a strong culture of a scholarship of teaching and learning in Shanghai and the rest of China. As discussed in earlier chapters, teachers in China are held in high regard in society as content experts, scholars and teaching professionals who are publicly accountable for and committed to their students' academic achievements. There is therefore a sociocultural factor that propels the teachers and school leaders to uphold their profession and to remain committed to their calling through improving their students' results, continual research and self-cultivation.

The parents also play a major role in expecting teachers to assist their children academically, thereby leading to continuous and substantial home-school partnerships. Collectively, Shanghai teachers, students, parents and other educational stakeholders subscribe to a shared vision in Shanghai that values education and that all children can achieve. This explains, as noted earlier, the solid foundational knowledge and skills for Shanghai students – a factor highlighted by many Shanghai educators to account for Shanghai's PISA's performance.

Many Shanghai teachers, even as they are extrinsically motivated to meet the targets, indicators and evaluations imposed by the authorities, are *also* intrinsically motivated by their identity and social status as 'laoshi' (old experts) and 'shifu' (masters). In other words, the introduction of performative measures has not led to a de-professionalisation of teachers in Shanghai; on the contrary, these measures such as the appraisal meeting, annual review, peer reviews and inspections have been cleverly used by the authorities to enhance the teachers' competencies through teacher professional development. We have seen in earlier chapters how the school developmental supervisory appraisal, school-based teacher professional development and teacher's teaching work inspection and appraisal are organically and seamlessly integrated and mutually reinforcing.

Another example to illustrate the mediating role of cultural scripts against performativity is teacher collaboration through teaching-research groups. International literature has shown that professional development has strong positive effects on teaching practice, and that professional learning communities have a strong positive relationship with student achievement (e.g. see Darling-Hammond & Richardson, 2009; Thompson, Gregg, & Niska, 2004). However, a challenge with the effective implementation of professional learning communities is a tendency for teachers to meet targets by focussing largely on the form rather than the substance of teacher collaboration. That teachers are already burdened with a heavy teaching workload and often underpaid aggravates the problem of effective professional learning communities.

In the case of Shanghai, however, professional learning communities through the teaching-research groups generally succeed in going beyond measures of performance, productivity or output to empowering teachers to develop their skills and improve student achievement. A key factor for the successful implementation of teacher collaboration is structural: Shanghai teachers have relatively light teaching load (Shanghai teachers teach an average of 8–10 teaching hours a week, whereas Singapore teachers teach an average of 14–16 h a week) are reasonably well paid compared to their non-teaching peers in Shanghai (the average pay of a teacher is about 9,000 yuan which is about US$1440), teaching-research group activities are factored into the timetable, teaching-research group leaders are paid extra for their role as group leaders and teacher collaborative activities are considered for teacher professional development and teacher appraisal.

Beyond the structural factor, however, are sociocultural factors to explain the effective and sustained implementation of teacher collaboration. Collectivism means that many Chinese teachers do not have an issue with sharing their resources with their colleagues or welcoming their colleagues to observe their lessons. The value of collectivism is fortified by the web of 'guanxi'; it functions as an invisible hand

and powerful social control to ensure that all social relationships are lubricated by long-term trust, respect, negotiation, loyalty and mutual benefit.

It is therefore arguable that educational success in Shanghai rests paradoxically on the notion of *performativity* as a means of incentive, control, attrition and change based on rewards and sanctions, both material and symbolic.

However, I am not claiming that the technology, culture and regulatory mode of performativity do not pose any problems in Shanghai. Neither am I asserting that the educational stakeholders do not resist or circumvent the targets, indicators and evaluations. I have noted in the various chapters how different stakeholders work against one another due to their divergent agendas. Countermeasures taken by the school leaders and teachers to circumvent discipline by the authorities include not offering expanded and inquiry/research courses for graduating cohorts, continuing the practice of selecting good students through school choice, and persisting in giving copious homework beyond the official stipulated workload for students. But my point is that Shanghai does not face the problems generated by performativity in the same way or to the same extent when compared to the Anglophone societies. This is due to, as this section has argued, cultural scripts that are relatively more accepting of the phenomenon of performativity in the Shanghai context. Returning to the first position listed by Jeynes, East Asian systems are culturally distinct from Anglophone societies and any attempt at learning from them *without considering situated sociocultural elements* is a near-futile exercise.

Learning ABC from Shanghai

However, I am not thereby arguing that we cannot learn anything from Shanghai's experiences. I believe that policy borrowing is fruitful as long as one is aware of its limitation and of the local sociocultural conditions that may shape, influence and determine policy implementation and outcomes. It is interesting to note that Jeynes' second position states that the world (especially those in the Anglophone societies) should learn from East Asian systems because 'East Asia's success was attained by learning lessons from the West which the West itself had forgotten' (p. 907). I think this position is too simplistic an explanation: Shanghai's educational success was indeed attained by learning lessons from the West, but there is more to Shanghai's success. What then are the learning points from Shanghai's experience? I would like to summarise the lessons learnt in the acronym ABC:

A: Anchor Yourself on What You're Already Good At

First, what is evident in Shanghai's case is that the Shanghai authorities and key educational stakeholders do not give up what they know they are already good at. In my interaction with Shanghai educators, it is clear that they are conscious of their strengths and distinctive edge over other countries. When I asked them why Shanghai did so well in PISA, many pointed to the indigenous strengths of Shanghai/Chinese education. There are 3 main strengths of Shanghai education.

First is educational balance that ensures that all students from across the system can benefit from learning opportunities. 'Shanghai's good results are linked to Shanghai's equal development and educational balance', noted a principal. The second strength is the in-depth and thorough grasp of content knowledge and skills for core subjects such as Chinese language, Mathematics and the sciences. 'Education in China emphasises foundational learning, it's a national characteristic and publicly recognised', said a school principal. 'Our foundation is deep and broad, training is very solid', echoed a teacher. Third is a Chinese culture and practice of teacher collaboration. 'We do not go solo', said a teacher. 'We emphasise teacher sharing so it's easy for us to share what's good, easy to spread what's new', said another. All the above strengths are premised on and surrounded by cultural scripts that highly value education and place a very high expectation of and demand on the school leaders, teachers and parents.

In the drive to prepare oneself for the challenges of globalisation, it is tempting for policymakers to jettison what is 'old', 'traditional' and 'old fashioned'. But not for Shanghai. It continues to anchor its curriculum reform on what it has always been strong at: centralised control; a curriculum that provides a solid foundation for students especially in the compulsory education phase (primary and junior secondary levels); a teaching approach that promotes intensive teaching, discipline, sufficient practice, and systematic and logical thinking; and a culture of strong teacher mentoring and collaboration.

B: Borrow New Ideas Judiciously

The second lesson is that Shanghai's policymakers and educators are open minded and keen to learn and adapt new educational ideas and practices from foreign sources. 'Shanghai will keep a lookout for the latest in the world and prepare for it', said a teacher. 'Once we learn of something new in the world, any new ideologies and methods from another country, we'll quickly discuss them, experiment and consider how we can use it', said a principal. The enthusiasm to apply new ideas and practices, however, does not mean that they are adopted wholesale. Rather, the educators are adept at modifying and synthesising them so that the educational initiative or approach is tailored to suit local conditions and needs. In the words of the former director general of Shanghai Municipal Education Commission Shen Xiaoming, 'Shanghai is exploring new ways of developing its education *with unique Chinese characteristics*' (Shen, 2007, p. xi, italics added).

The idea of borrowing from the West/foreign sources is not new in China. Back in the Qing dynasty, some officials belonging to the Western Modernisation Movement advocated adopting Western technologies based on the principle of 'Chinese learning for moral perfection and the Western learning for material production' (Shen, 2007, pp. 1–2). But what is unique about Shanghai, in my view, is its ability to go beyond adapting superficial and piecemeal elements of Western/foreign ideas and practices, to synthesise and create a coherent and sustainable framework with which to serve local agendas. As a Shanghai principal put it,

'Shanghai's top principals look at developed countries' current reform experiences and design their curriculum reform based on our country's situation'. Law (2012), in his research on educational leadership and culture in China, reports that a Shanghai principal cautions against 'blind learning and borrowing from the West' and that 'Chinese school leaders perceive a coexistence of Chinese and Anglo-American leadership and management values, rather than the domination of one over the other' (2012, p. 273). The coexistence is demonstrated in the Shanghai authorities combining the policy of decentralisation that is more commonly found in Anglophone societies, with centralisation that has characterised Chinese politics and social governance.

It should be added that Shanghai's ability to adapt and synthesise ideas is not the work of just one stakeholder, nor is it always planned. For example, the teachers' combination of teacher-dominated and student-centred approaches stems from their own pragmatic interest to support curriculum reform while ensuring that their students' exam grades do not suffer.

In the process of borrowing new ideas judiciously, Shanghai policymakers and educators are also prepared to review and give up some elements of their traditional beliefs and assumptions. We see this, for instance, in the willingness and resolve of Shanghai authorities and educators to promote student-centred teaching and learning instead of clinging onto their traditional 3 centres (teacher-centredness, classroom-centredness and text-centredness). Shanghai educators have also strategically combined learner-centred pedagogies that are more commonly adopted in Anglophone societies, such as small group discussions and students' oral presentations, within a classroom environment that remains teacher dominated, orderly and disciplined. We have also seen how the Shanghai educators skilfully incorporate elements of critical thinking in their teaching to meet the dual goals of quality-oriented education and exam preparation.

A shift towards student-centredness requires not just a change in teaching methods but also a change in the cultural script on teaching and learning. While the '3 centres' will remain relevant in Shanghai, especially in preparing students for the zhongkao and gaokao, the '3 *new* centres' for Shanghai, in my view, are student-centredness, real-world-centredness and practice-centredness. That Shanghai has obtained success in PISA where the test questions focus on solving real-life problems signifies that the city has begun to embrace the 3 new centres. The case in Shanghai reminds us that cultural scripts, when interacted with the global forms of internationally standardised assessment and curriculum reform, are inevitably questioned and revised over time. The case study of Shanghai also illustrates the evolving nature of a tradition (in this case, a Chinese tradition) through its ongoing interaction with the past, present and future.

Commenting on Shanghai's reform discourse on student learning and constructive learning, an OECD report states the following:

> It is not just an improvement of the existing conventional curriculum, but an overhaul of the fundamental concept of curriculum, and hence it challenges basic assumptions about education and curriculum. It means not doing what has traditionally been done, but doing more, better and differently. Hence, it is curriculum reform in the genuine sense. (OECD, 2011)

However, I do not agree that Shanghai has chosen not to do, 'what has traditionally been done', and has instead done things differently. Rather, what Shanghai has done is to interpret and propagate the constructivist idea of student learning using Chinese characteristics. In other words, the practice of student-centred and active learning in Shanghai classrooms retains strong traditional features of teacher domination and classroom discipline. Some academics have similarly noted the selective borrowing, adaption and synthesis of the Chinese educators. They have used different terms to describe this practice, such as the 'hybrid model' (Paine & Fang, 2006) and 'third space' (Tsui & Wong, 2009). This strategy of judicious borrowing is what other countries and regions can learn from Shanghai: take what has worked in your locality and see how it can be adapted and combined with new/foreign elements to produce something that is *even better*.

C: Continue to Improve and Excel

Thirdly, there is no sense of complacency among the educational stakeholders in Shanghai. While I observed collective pride from the Shanghai people regarding their PISA achievements and curriculum reform (and justifiably so), I got a greater impression that they are more interested in looking forward and improving further. 'We've obtained certain results, but we still need to persevere', said a principal. A teacher said: 'We're only experimenting in our curriculum reforms, whether we do it well or not at the end, we don't know yet but we're very fortunate as our leaders have been very supportive of our explorations'. Even when highlighting their PISA achievements, a number also pointed out the advantage Shanghai students have over their peers that explains their PISA success. 'Shanghai students are well trained to handle written exams', said a teacher. 'We spend the longest time studying, all the weekend is spent on studying', said a vice-principal. 'Our children start learning at a much younger age,' added another.

Related to the spirit of continuous improvement is the acknowledgement of their shortcomings. That is something that leaves a deep impression on me: many Shanghai principals and teachers are forthright in acknowledging what they are weak at. 'In practical hands-on ability and innovative ability, Shanghai students will not be number one in the world', said a principal in his assessment of PISA. 'Our moral education is out of touch with the real world, it emphasises teaching transmission methods and does not place enough emphasis on student participation', said another principal. A number of Chinese educators and academics have also noted the problems with the curriculum reform and the continuous tensions and conflicts between quality-oriented education and exam-oriented education.[1]

The Shanghai authorities are also aware of the challenges facing them and are not resting on their laurels. They have identified a number of weaknesses and areas for improvement since their participation in PISA and have plans for the city

[1] For example, see Ye (2009), Li and Li (2010), Shangguan (2005), Shen (2006a, 2006b), Zhen (2006), Zhong and Qu (2007) and Tan (2012, 2012b).

to improve further, as evidenced by a number of reports that have been published (e.g. see Jiang, 2011; Shen, 2011b; Wang, 2011a). These areas of improvement include giving students greater autonomous learning spaces and strengthening the students' self-regulation strategies. These are based on OECD's report that Shanghai students spent relatively long hours of curriculum time in school and that about half of Shanghai students rarely use self-regulation strategies in learning (Shen, 2011b).

Conclusion

The ability to adapt global education policies and practices to suit local conditions and needs is crucial in the world today where policy borrowing is popular. There exists transnational pressure and a tendency for policymakers worldwide to adopt a globally oriented education policy so as to prepare their graduates for the 21st century. Applying policy transfer and borrowing, many countries highlight the value of life-long learning, higher-order thinking skills, better utilisation of technology in education, holistic assessment, decentralisation and devolution of power to principals. Shanghai is one of these countries. But what makes Shanghai remarkable is its ability to synthesise what's new or foreign with Chinese characteristics so that the policy or idea works for its own context and needs.

In conclusion, the educational success in Shanghai is a combination of structural and sociocultural factors. The structural factor is seen in heavy investment and active involvement of the authorities in ensuring educational equity, balance and high standards. The sociocultural factor is evident in the shared moral vision of education; the social expectations of schools, teachers and students; and the central functions of exams and other means of measurement and appraisal. Our Shanghai case study illustrates that while many lessons can be drawn from Shanghai on achieving educational success, global education policy cannot be simplistically borrowed and transferred from one context to another without considering its interplay with local factors, logics and circumstances. It follows that policymakers need to judiciously capitalise on their indigenous sociocultural (counter-)factors to aid and not hinder their policy borrowing and implementation if they wish to achieve similar 'stunning success'.

References

Ball, S. J. (2000). Performativities and fabrications in the education economy: Towards the performative society? *The Australian Educational Researcher, 27*(2), 1–23.

Ball, S. J. (2003). The teacher's soul and the terrors of performativity. *Journal of Education Policy, 18*(2), 215–228.

Darling-Hammond, L., & Richardson, N. (2009). Teacher learning: What matters? *Educational Leadership, 66*(5), 46–53.

Jeynes, W. (2008). What we should and should not learn from the Japanese and other East Asian education systems. *Educational Policy, 22*(6), 900–927.

Jiang, Y. (2011). *Jiang Yinqiao: PISA kaoshi qishilu – yi Shanghai diqu weili* [Jiang Yinqiao: revelations from PISA assessment – using Shanghai as an example]. http://www.bonoffer.com/view-3269-1.html. Accessed 20 Jan 2012.

Kamens, H. D., & McNeely, L. C. (2010). Globalisation and the growth of international testing and national assessment. *Comparative Education Review, 54*(1), 5–25.

Law, W.-W. (2012). Educational leadership and culture in China: Dichotomies between Chinese and Anglo-American leadership traditions? *International Journal of Educational Development, 32*(2), 273–282.

Li, W., & Li, Y. (2010). An analysis on social and cultural background of the resistance for China's education reform and academic pressure. *International Education Studies, 3*(3), 211–215.

Lingard, B. (2010). Policy borrowing, policy learning: Testing times in Australian schooling. *Critical Studies in Education, 51*(2), 129–147.

OECD [Organisation for Economic Co-operation and Development]. (2011). *Lessons from PISA for the United States. Strong performers and successful reformers in education*. http://dx.doi.org/10.1787/9789264096660-en. Accessed 12 Jan 2012.

Paine, W. L., & Fang, Y. (2006). Reform as hybrid model of teaching and teacher development in China. *International Journal of Educational Research, 45*(4–5), 279–289.

Shangguan, Z. M. (2005). *Jiaoyu de guoji shiye* [Education's international vision]. Shanghai: East China Normal University.

Shen, Y. (2006a). Xuexiao jiaoyu zhiliang baozhang wenti tanxi [Exploring the problems for school education quality assurance]. In Y. Shen (Ed.), *Zou xiang youzhi jiaoyu* [Walking towards quality education] (pp. 210–252). Shanghai: East China Normal University Press.

Shen, Y. S. (2006b). *Kecheng pingjia* [Classroom appraisal]. Beijing: Beijing Normal University Press.

Shen, Z. (2011b). Cong PISA kan Shanghai yiwu jiaoyu junyun fazhan [Looking at educational balanced development in Shanghai basic education from PISA]. *National Assessment of Education Quality*.http://www.eachina.org.cn/eac/dfjc/ff8080812d26e618012e6f19817e00e8.htm. Accessed 20 Mar 2012.

Tan, C. (2008b). Globalisation, the Singapore state and educational reforms: Towards performativity. *Education, Knowledge and Economy, 2*(2), 111–120.

Tan, C. (2012). The culture of education policy making: Curriculum reform in Shanghai. *Critical Studies in Education, 53*(2), 153–167.

Tian, M. (2011). *Distributed leadership and teachers' self-efficacy: The case studies of three Chinese schools in Shanghai.* Master's thesis, Department of Education, Institute of Educational Leadership, University of Jyväskylä.https://jyx.jyu.fi/dspace/bitstream/handle/123456789/37175/URN:NBN:fi:jyu-201201091015.pdf?sequence=1. Accessed 7 Mar 2012.

Troman, G. (2008). Primary teacher identity, commitment and career in performative school cultures. *British Educational Research Journal, 34*(5), 619–633.

Tsui, B. N. A., & Wong, J. (2009). In search of a third space: Teacher development in mainland China. In C. K. K. Chan & N. Rao (Eds.), *Revisiting the Chinese learner: Changing contexts, changing education* (pp. 281–311). The HKU Scholars Hub. http://hdl.handle.net/10722/57048. Accessed 3 Jan 2012.

Turner-Bisset, R. (2007). Performativity by stealth: A critique of recent initiatives on creativity. *Education 3–13: International Journal of Primary, Elementary and Early Years Education, 35*(2), 193–203.

Wang, J. (2011a). Cong PISA2009 ceshi tankaiqu [Views from PISA 2009]. *Shanghai Education, 5*(3A), 48–51.

Ye, J. (2010). *Shenma shi zhongguo tese de shuxue jiaoyu* [What is mathematics education with Chinese characteristics?]. http://www.stxq.yje.cn/news4/disnews.asp?id=1118&lm_id=49&b-type_id=492. Accessed 1 Feb 2012.

Zhen, J. (2006). Xiaoben yanjiu [School-based research]. In Shen, Y. (Ed.). *Zou xiang youzhi jiaoyu* [Walking towards quality education] (pp. 84–124). Shanghai: East China Normal University Press.

Zhong, Q., & Qu, G. (2007). *Fansi zhongguo jiaoyu* [Reflections on Chinese education]. Shanghai: East China Normal University.

Epilogue

Photo 1 A student's painting of school life

A junior secondary student in Shanghai completed the beautiful painting above. It showcases the student's interpretation of school life. It depicts students performing a variety of tasks, from reading books, to playing the violin, having drinks and even napping in the midst of lush greenery. It's a lovely picture of school life – one where students are able to enjoy a holistic education and experience life. It also reminds me of the inscription on the stone mentioned in the introductory chapter. 'Learn painstakingly, experience joyfully' expresses the aspiration of Shanghai education in a nutshell.

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6, © Springer Science+Business Media Dordrecht 2013

Commenting on Shanghai's PISA achievements, Chester E. Finn Jr., who served in President Ronald Reagan's Department of Education opined:

> Wow, I'm kind of stunned, I'm thinking Sputnik, … I've seen how relentless the Chinese are at accomplishing goals, and if they can do this in Shanghai in 2009, they can do it in 10 cities in 2019, and in 50 cities by 2029. (Top test scores From Shanghai stun educators, *The New York Times*, December 7 2010)

But Finn is only half right. It is true that Shanghai has indeed achieved much and showed the world what other Chinese cities may be able to achieve in the future. But that's not *all* that Shanghai is capable of. Shanghai remains resolved to press on, constantly seeking to improve and excel.

We've only read the beginning of the Shanghai story.

Blurb

Ranked as a 'stunning success' by the Organisation for Economic Co-operation and Development (OECD), Shanghai has attracted worldwide attention since its impressive performance in the Programme for International Student Assessment (PISA). Shanghai also stands out for having the world's highest percentage of 'resilient students' – students from socio-economically disadvantaged backgrounds who emerged as top performers.

Learning from Shanghai: Lessons on Achieving Educational Success offers a close-up view of Shanghai by exploring the key factors that explain its exceptional success in education.

Highlights of the Book:

- Offers in-depth and original analysis of the policies, people and practices that underpin Shanghai's educational success;
- Combines scholarly research and the author's personal insights;
- Includes empirical research conducted in Shanghai schools and with Shanghai school leaders, teachers, students and other educational stakeholders from 2011 to 2012; and
- Identifies factors in educational success, using Shanghai as a case study for policymakers, academics, educators and the general public.

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6, © Springer Science+Business Media Dordrecht 2013

About the Author

Charlene TAN is an associate professor at the National Institute of Education, Nanyang Technological University, and was a visiting research associate at the East Asian Institute, National University of Singapore. Since 2008, she has been teaching a Master's course on educational policy making to Shanghai school leaders.

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*,
Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6, © Springer Science+Business Media Dordrecht 2013

Glossary of Chinese Terms

- A thousand soldiers and horses crossing a single-plank bridge [qianjun wanma guo dumuqiao] 千军万马过独木桥
- All for the sake of the student [yiqie weile xuesheng] 一切为了学生
- Allow the sheep to roam freely without supervision [fangyang] 放养
- Backbone teacher [gugan jiaoshi] 骨干教师
- Balance [junyun] 均匀
- Bundled school management [kunbang banxue] 捆绑办学
- Change ten thousand times without departing from the original position [wanbian buli qizhong] 万变不离其中
- Children should not interject when adults are talking [daren jianghua, xiaohaizi buyao chazui] 大人讲话, 小孩子不要插嘴
- College entrance rate [shengxuelü] 升学率
- Compete based on aspiration and not extravagance, on diligence and not intelligence, on improvement and not foundation [bubi kuoqi bizhiqi, bubi congming biqinfen, bubi jichu bijinbu] 不比阔气, 比志气, 不比聪明, 比勤奋, 不比基础, 比进步
- Constructing a dialogue style school culture [duihuaxing xuexiao wenhua jianshe] 对话型学校文化建设
- Core points [hexindian] 核心点
- Counterpart schools [duikou xuexiao] 对口学校
- Design lessons based on the best developmental period, and teach based on the highest zone of proximal development [an zuijia fazhanqi sheke, chuang zuijin fazhanqu shijiao] 按最佳发展期设课, 创最近发展区施教
- Difficult points [nandian] 难点
- Dissimilar conception [xiangyi gouxiang] 相异构想
- Do not let your child lose out at the starting line [burang haizi shuzai qipaoxian shang] 不让孩子输在起跑线上
- Double famous project [shuangming gongcheng] 双名工程
- Eat from the big pot [chi daguofan] 吃大锅饭
- Educating humans is the priority [yuren weixian]育人为先
- Educational balance [jiaoyu junheng] 教育均衡

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*, Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6, © Springer Science+Business Media Dordrecht 2013

- Empirical cycle [xunhuai shizheng] 循坏实证
- Entrusted management [weituo guanli] 委托管理
- Exam is the baton [kaoshi shi zhihuibang] 考试是指挥棒
- Expanded course [tuozhanxing kecheng] 拓展型课程
- Experimental demonstration schools [shiyanxing shifanxing xuexiao] 实验性示范性学校
- Expert style teacher mentoring training [zhuanjiaxing jiaoshi daijiao peixun] 专家型教师带教培训
- Fair development [gongping fazhan] 公平发展
- Famous teachers, famous principal project [mingshi mingxiaozhang gongcheng] 名师名校长工程
- Famous Teacher's Studio [mingshi gongzuoshi] 名师工作室
- Focus on strengthening [zhongdian jiaqiang] 重点加强
- Force-feeding the duck [tianyashi] 填鸭式
- Form teacher [banzhuren] 班主任
- Foundational course [jichuxing kecheng] 基础型课程
- Foundational points [jichudian] 基础点
- Group mentoring [tuandui daijiao] 团队带教
- Hard indicator [ying zhibiao] 硬指标
- High scores [but] low abilities [gaofen dineng] 高分低能
- Home-made lessons [jiachangke] 家常课
- Hoping your son will be a dragon, your daughter will be a phoenix [wangzi chenglong, wangnü chengfeng] 望子成龙, 望女成凤
- Human beings are willing to die for money and birds are willing to die for food [renwei caisi, niaowei shiwang] 人为财死, 鸟为食亡
- Human-oriented [yiren weiben] 以人为本
- If you don't have (high) college entrance rates, you cannot survive today. If you only have (high) college entrance rates, you cannot survive tomorrow. [ni meiyou shengxuelü, ni guobuliao jintian, ni zhiyou shengxuelü, ni guobuliao mingtian] 你没有升学率, 你过不了今天。你只有升学率, 你过不了明天。
- Inner strength [neigong] 内功
- Inquiry/Research course [tanjiuxing, yanjiuxing kecheng] 探究型, 研究型课程
- Integrated ability assessment [zonghe nengli ceshi] 综合能力测试
- Intensive teaching [jingjiang] 精讲
- Interview guide to top primary school admission [mingpai xiaoxue ruxue mianshi zhinan] 名牌小学入学面试指南
- Joyful education [yukuai jiaoyu] 愉快教育
- Junior secondary graduating exam [chuzhong biye kaoshi] 初中毕业考试
- Junior secondary school entrance exam [zhongkao] 中考
- Key-point or focused school [zhongdian xuexiao] 重点学校
- Learn painstakingly, experience joyfully [keku xuexi, kuaile tiyan] 刻苦学习, 快乐体验
- Language [yuwen] 语文
- Leading subject teachers [xueke daotou jiaoshi] 学科带头教师
- Learning by doing [zuozhongxue] 做中学

- Learning from books [shuzhongxue] 书中学
- Lesson preparation group [beikezu] 备课组
- Loosen one's grip on things [fangshou] 放手
- Lone soldier at battle' [danbing zuozhan] 单兵作战
- Master-disciple mentoring [shitu daijiao] 师徒带教
- Material essay [cailiao zuowen] 材料作文
- National basic education curriculum reform's teaching research finding [quanguo jichu jiaoyu kecheng gaige jiaoxue yanjiu chengguo] 全国基础教育课程改革教学研究成果
- National college or higher education entrance exam [gaokao] 高考
- National standardised exam for student admission into ordinary higher institutions in China [zhongguo de putong gaodeng xuexiao zhaosheng quanguo tongyi kaoshi] 中国的普通高等学校招生全国统一考试
- Neighbourhood counterpart enrolment [jiujin duikou ruxue] 就近对口入学
- New episode of Meng's mother selecting a neighbourhood [xin mengmu zelin] 新孟母择邻
- No one should be deprived of an education, no matter how poor you are' [zaiqiong yebunengyou qiongjiaoyu] 再穷也不能有穷教育
- No studying without writing [budong maobi budushu] 不动毛笔, 不读书
- One exam to determine the rest of your life' [yikao ding zhongshen] 一考定终身
- One day as my teacher, the rest of my life as my father [yiri weishi, zhongshen weifu] 一日为师, 终身为父
- One lesson that is polished many times, conducted many times and revised many times [yike duomo, yike duoshang, yike duogai] 一课多磨, 一课多上, 一课多改
- One man show [yirentang] 一人堂
- Open the classroom door to create learning together [dakai jiaoshi damen, gongchuang xuexi gongtongti] 打开教室大门, 共创学习共同体
- Open-day system [kaifangri zhidu] 开放日制度
- Organisation [zuzhi] 组织
- Oriented towards student development [yi xuesheng fazhan weiben] 以学生发展为本
- Permanent registered address [hukou] 户口
- Post-tea house teaching [houchaguanshi jiaoxue] 后茶馆式教学
- Prenatal education [taijiao] 胎教
- Promotion and appointment committee [pinren weiyuanhui] 聘任委员会
- Public or open lesson [gongkaike] 公开课
- Quality [suzhi] 素质
- Quality-oriented education [suzhi jiaoyu] 素质教育
- Quota allocation policy [minge fenpei fa] 名额分配法
- Random lesson observation [suitang tingke] 随堂听课
- read read, discuss discuss, practise practise, talk talk, do do [dudu, yiyi, lianlian, jiangjiang, zuozuo] 读读, 议议, 练练, 讲讲, 做做
- Reform on life experiment and experiment life [shenghuohua shiyan, shiyan shenghuohua geige] 生活化试验, 试验生活化改革

- Relation or human connection [guanxi] 关系
- School-based research-training [xiaoben yanxiu] 校本研修
- School developmental and supervisory appraisal [xuexiao fazhanxing dudao pingjia] 学校发展型督导评价
- Schoolwork standard exam [xueye shuiping kaoshi] 学业水平考试
- Scores are really the fairest [fenshu caishi zui gongzhengde] 分数才是最公正的
- School choice [zexiao] 择校
- School choice fever [zexiaore] 择校热 School's special characteristics [xuexiao tese] 学校特色
- Second phase curriculum reform [erji kegai] 二期课改
- Seek the truth, foster originality and live up to the name of teacher [qiushi chuangzao, weiren shibiao] 求实创造, 为人师表
- Shanghai story [Shanghai gushi] 上海故事
- Shanghai training project for famous principals [shanghaishi mingxiaozhang peixun gongcheng] 上海市名校长培训工程
- Special-grade teacher [teji jiaoshi] 特级教师
- Steer the rudder according to the wind's direction [suifeng zhuanduo] 随风转舵
- Student as the subject [yi xuesheng wei zhuti] 以学生为主体
- Student-oriented [xuesheng weiben] 学生为本
- Suifeng zhuanduo [steering the rudder based on the wind's direction] 随风转舵
- Taking what is long to make up for what is short [quchang buduan] 取长补短
- There are no students who cannot be taught well, only teachers who cannot teach well [meiyou jiaobuhao de xuesheng, zhiyou jiaobuhao de laoshi] 没有教不好的学生, 只有教不好的老师
- Talking all the way [mantangguan] 满堂灌
- Tea house teaching [chaguanshi jiaoxue] 茶馆式教学
- Teacher to talk less and listen more, students to diligently discuss and ask questions [laoshi shaojiang duoting, xuesheng qinyi shanwen] 老师少讲多听, 学生勤议善问
- Teacher [jiaoshi or laoshi] 教师或教师
- Teachers' congress [jiaodaihui] 教代会
- Teaching quality test [jiaoxue zhiliang jiance] 教学质量检测
- Teaching-research groups [jiaoyanzu] 教研组
- The top has its measure, the bottom has its countermeasure [shangyou zhengce, xiayou duice] 上有政策, 下有对策
- The words of children are harmless [tongyan wuji] 童言无忌
- Thursday award [xinqisi jiang] 星期四奖
- To develop every student [weile meiyige xuesheng de fazhan] 为了每一个学生的发展
- To develop the lifelong learning of every child [weile meiyige haizi de zhongshen xuexi] 为了每一个孩子的终身学习
- To give a student a cup of water, a teacher should have a bucket of water [yaogei xuesheng yibieshui, jiaoshi ziji yinggai you yitongshui] 要给学生一杯水, 教师自己应该有一桶水
- To haggle over every point [fenfen jijiao] 分分计较

- Trainee teacher [shixi jiaoshi] 实习教师
- Two-tier government, two-tier management [liangji zhengfu, liangji guanli] 两极政府, 两极管理
- Uniformity of schools [qianxiao yimian] 千校一面
- Value of (exam) scores [shuzhi] 数值
- Vocational qualification [zhuanke] 专科
- With labour comes reward [youlao youchou] 有劳有 酬
- Work regulation (draft) on research group for secondary teaching [guanyu zhongxue jiaoxue yanjiuzu gongzuo tiaoli (caoan)] 关于中学教学研究组工作条例（草案）
- Zone of proximate development [zuijin fazhanqu] 最近发展区

Index

C. Tan, *Learning from Shanghai: Lessons on Achieving Educational Success*, Education in the Asia-Pacific Region: Issues, Concerns and Prospects 21,
DOI 10.1007/978-981-4021-87-6, © Springer Science+Business Media Dordrecht 2013