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# Shanghai and Hong Kong-China: Learning to Learn

Less than three decades after the Cultural Revolution, when educated people, including teachers, were sent to rural areas to work in the field, parts of China, notably Shanghai, now rank among the best-performing countries and economies in PISA. This chapter looks at how the education systems in both Shanghai and Hong Kong-China have benefited from the realisation that economic growth depends on individuals who are adaptable, creative and independent thinkers. Education reforms in these two cities have focused on upgrading teaching standards and teacher education, introducing greater curricular choice for students, and giving local authorities more autonomy to decide the content of examinations.



## INTRODUCTION

Despite China's emergence as one of the world's most influential economies, relatively little is known in other countries about the country's education system and how its students learn. The prevailing impression tends to be that students in China learn by rote, and that much in the schools is about memorising and cramming for examinations.

This chapter seeks to provide a more nuanced and accurate picture of education in China, using Shanghai and Hong Kong-China as examples. Shanghai is one of China's most developed urban areas, while Hong Kong-China, despite having similar cultural roots, has a different society, and is more or less self-governing under the "one country, two systems" political arrangement. While Shanghai and Hong Kong-China may not be representative of all parts of such a diverse country, they can provide a window into education in China through their shared lessons and future ambitions. In both cases, student learning has become the focus, with other dimensions – such as teaching, school facilities and systemic strategies – providing the context and supporting various aspects of student learning.

This chapter begins by describing the cultural and historical context – essential for understanding China's education systems and philosophy – before moving on to describe the education systems and recent reforms in Shanghai and Hong Kong-China.

## THE CULTURAL CONTEXT

Observers outside China frequently attribute the success of the students in Shanghai and Hong Kong-China to their cultural heritage. The most overwhelming cultural influence in this part of the world is Confucian philosophy, which originated in China.<sup>1</sup> While it is complex and not easy to define, Confucianism sees human beings as teachable, improvable and perfectible through personal and communal endeavour, especially including self-cultivation and self-creation. There is a general observation that the Confucian heritage favours children's education; hence education has the support of parents and society at large. Nevertheless, this heritage has also brought some limitations and struggles to the realm of education in these Confucian societies.

Certainly, China has a long tradition of valuing education highly. This was bolstered early on by the Civil Examination system, established in 603 AD, and which was later exported to Japan and Korea in the 7th century. It was a competitive, yet efficient, system for selecting officials, and was known for its rigor and fairness. The general approach was basically an essay test, in which the candidates were confined for days in an examination cell, fed with good food, and required to write essays of political relevance. Candidates prepared for years<sup>2</sup> by reading the classics (*the Four Books and Five Classics*). In their essays, they had to recite and quote these ancient texts to support their arguments – hence the requirement for "rote learning". The final selection procedure was usually held in the Examinations Department, which was often part of the imperial organisation. Whoever gained the appreciation of the Emperor, who was virtually the chief examiner, would be the champion, followed by a few runners-up.

These examinations evolved over many dynasties before they were abolished in 1905. There are several features of the Civil Examination that distinguished it from other systems of civil servant selection and recruitment. It involved a selection process open to all candidates regardless of their background and with virtually no pre-requisites, other than that of gender.<sup>3</sup> In fact it was the only path for social mobility in ancient Chinese society; becoming an officer was the only way one could change one's social status. The incentive was tremendous, and reinforced by the fact that Chinese folklore over hundreds of years – reflected in novels, operas, dramas and all art forms – included stories about scholars from poor families who endured years of hardship and poverty before triumphing in the Civil Examination, being appointed ministers, marrying princesses and enjoying glorious homecoming ceremonies. Even today, a large number of ancient novels and operas that refer to success in the Civil Examination by candidates from poor families are still popular.

The Civil Examination gave almost all families, regardless of socio-economic status, high hopes for their children's (i.e. boys') future, and such hopes translated into hard work and adaptability to difficult learning environments. However, it also led to an almost exclusive emphasis on examination results for validating genuine learning or knowledge. It meant that for more than 16 centuries, generation after generation of young people were trained only to face the challenges of examinations.

### Cultural paradoxes

The heritage of the Civil Examination has brought several paradoxes to the education systems of Confucian societies:

**Paradox One.** Education is the most essential means of social mobility and, as such, is an overriding policy concern, and the most important item on parents' agendas. However, this also explains the unanimous conclusion in the contemporary literature that motivation for student achievement in Confucian societies is largely extrinsic in nature. That is, success in education is not equivalent to learning more or better; it means succeeding in examinations.

**Paradox Two.** It is taken for granted that education is a matter of selection. It does not matter how well one achieves; it is about the degree to which you are better than others, or how resoundingly you could beat others. In this context, the Civil Examinations



put every candidate on a level playing field. Everybody who wanted to receive the prize had to follow the same rules. On the one hand, the Civil Examination reflected the collectivism in society and, in return, helped shape a collective culture. It bred both aggressiveness and adaptability among young people. On the other hand, everyone had to submit to uniform requirements, rather than what one might desire or feel one deserved. This reflected a general negligence, if not suppression, of individuality and diversity in human development.

**Paradox Three.** The Civil Examination legacy has instilled the virtue of hard work, and emphasised effort over innate ability (Stevenson and Stigler, 1992). This contrasts strongly with basic Western assumptions about ability versus effort, and indeed overturns the entire notion of ability. Many have attributed students' success in Confucian societies to this belief in hard work. However, such a belief has also led to unrealistic expectations of students' tolerance of pressures, examination pressures in particular. Indeed, while using the pressure for examination and competition has been attractive to many education reformers in the West, removing such pressure has become the major object of reform in Confucian societies.

## THE HISTORICAL CONTEXT

### Ideology-driven systems: 1905 to 1976

In China, a school system in the contemporary sense only began in 1905 after the abolition of the Civil Examination. However, China's mixed colonial history left a legacy of different school systems. For example, many of the schools in those early years were started in Shanghai (see below), largely because of the city's early contacts with the West. Shanghai was divided into "concessions" under the "unequal treaties" signed in the mid and late 19th Century. Schools in the British Concession followed the British system, and those in the French Concession followed the French system. Nevertheless, at the national level, schools were often seen as symbols of modernisation and liberalisation, and were strongly influenced by American educational thinkers, particularly John Dewey.

Since the establishment of the socialist nation state in 1949, the national system on China's mainland has undergone several stages of development. In the 1950s – the early years of the People's Republic – the entire education system followed the Russian model, with very rigid specialisation and heavy doctrines of collectivism. Then with the weakening of the Soviet link in the early 1960s, there was a short "renaissance" in education, when many innovations and new thinking blossomed. Shanghai was known for many such innovations and new thoughts, especially in the realm of pedagogy.

This renaissance was very short, swept aside by the Cultural Revolution (1966-1976), which proved a national disaster in all respects and which ruined the education system. Schools were closed down, and formal learning was replaced by practical experiences in farming and factories, underpinned by dense ideologies of class struggle. Schools and higher education institutions were taken over by political committees comprising workers, peasants and soldiers who were seen as the only people who could represent the proletariat revolutionary ideology.

### The reconstruction of education: the late 1970s onwards

It would not be exaggerating to say that China had to completely rebuild its education system in the late 1970s and early 1980s after the collapse of the Cultural Revolution. Indeed, it has been in a continuous era of overhauling and reforms ever since. The achievements of these reforms have been many and varied; to highlight a few:

- China achieved almost universal enrolment in basic education in a very short space of time, between around 1980 and the early 1990s. In most urban areas, there are now also very high enrolment rates at senior secondary level, either in general schools or vocational schools. Higher education has also seen spectacular expansion since 1999.
- China has decentralised its school system in terms of management and finance. Schools are basically administered by authorities at the county level. The school curriculum, textbooks and public examinations are also decentralised. Moving away from a centralised uniform system was quite an undertaking.
- There has been a significant expansion of the private sector, which could be interpreted as either mobilisation of non-government resources or the privatisation of public resources. Although the status of private schools is still sometimes unclear, and their quality varies, this trend is here to stay.
- With decentralisation leading to disparity among regions, between urban and rural areas, within cities, and between different types of citizens (mainly minorities and migrants), China has enacted a range of policy measures to overcome or reduce these differences. The latest move, begun in 2006 and guaranteed by law, is to target subsidies from the central government to regions according to economic need.
- Since the late 1980s, successive waves of curriculum reform have aimed to improve the quality of education and to reform public examinations. The syllabus and textbooks were decentralised for the first time in 1988. In 2001, there was a major reform in the curriculum to support modern pedagogical theory. Another new wave of reform started in 2010.



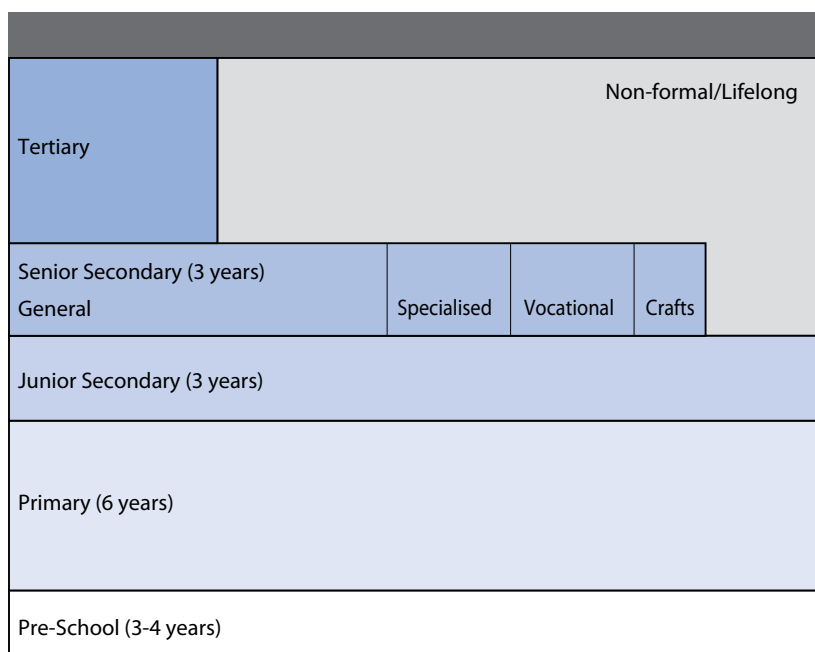
- China has expended enormous energy on upgrading teacher quality. Such efforts include re-training unqualified community teachers (*minban*) in rural schools and imposing qualifications requirements for teachers at all levels. China has finally managed to supply its vast system with enough teachers. In 2009, there were over 10.6 million teachers teaching over 200 million students in primary and secondary schools. Shanghai was among the first in China to have a fully-qualified teaching force. Moreover, Shanghai has raised the expected qualification of teachers well ahead of other parts of the nation.

### The system today

Overall, China has now passed the stage of quantitative expansion in basic education. Official statistics (for 2009) show a net enrolment rate of 99.4% at the primary school level, which is the envy of many countries. The gross enrolment ratio for junior secondary school was 99%.<sup>4</sup> In the same year, gross enrolment at senior secondary level, both academic and vocational, was 79.2%. The general academic senior secondary schools enrol 52.5% of students, putting the remaining senior high school students in the vocational and specialised stream (Figure 4.1). However, the figures may conceal regional disparities. In most urban areas, gross enrolment at the senior secondary level is 100% or above, which means that the number of students enrolled exceeds the number in the appropriate age group.

■ Figure 4.1 ■

### China's education system, 2009



Source: OECD (2012i).

If the highlight of the 1980s and 1990s was expansion of basic education to the entire population, then the emphasis of the first decade of the 21st century was on expanding higher education. Starting in 1998, China broke away from its long-standing policy of restricting higher education to a small percentage of the population, and launched a spectacular expansion. In 1999, all institutions across the nation were required to increase their intake by 50%. This was followed by jumps of 25% in 2000 and 22% in 2001.<sup>5</sup> Despite government intentions to pause this expansion, higher education has now gained its own momentum, and all kinds of non-government initiatives, such as private institutions and self-financing programmes, are flourishing at their own pace. The population of students in higher education grew from less than 6 million in 1998 to 29.8 million in 2009 – by far the largest and fastest such enrolment increase in the world.

However, the enrolment ratio still stood at a low 24.2% in 2009 (Ministry of Education of the PRC, 2010a), just short of the world average of 26% (Altbach et al., 2009).

The quantitative picture would not be complete without including China's complex structure of lifelong learning, which includes full-time sabbatical study, evening spare-time programmes, distance learning programmes and self-study examinations. Such learning opportunities often lead to formal credentials such as certificates and diplomas, and sometimes to degrees. Operators



range from major institutions of higher education (as their extension programmes), to individual professionals and private for-profit enterprises.

Having set the cultural and historical scene, we now turn to look at education and learning in two major Chinese cities: Shanghai and Hong Kong-China. Both are vibrant economies and have undertaken major comprehensive education reforms in the past two decades. While they have both inherited the same cultural traditions in education, the two cities work under different political and ideological frameworks. Nevertheless, their reform efforts share a similar philosophy of making student learning central, although this is approached in different ways.

## SHANGHAI: A LEADER IN REFORMS

Shanghai is a metropolitan area in China, whose urban population is now over 20.7 million, 13.8 million of whom are permanent residents and 5.4 million are considered temporary. In addition, there are around 1.5 million who can be classified as mobile or without a fixed home in Shanghai (Shanghai Municipal Statistics Bureau, 2010). The city is one of the four municipalities in China with the status of a province (the others are Beijing, Tianjin and Chongqing). In 2009, Shanghai's GDP was USD 11 361 per capita (Figure 4.3). While its population and land account for just 1% and 0.06% of the nation's total, respectively, the regional economy contributes to one-eighth of China's overall income (Information Office of Shanghai Municipality and Shanghai Municipal Statistics Bureau, 2010). In 2009, the contribution of the service sector to economic growth in Shanghai was around 60%, the highest on the Chinese mainland.

While Beijing is China's political centre, Shanghai is its undeniable business centre. Shanghai is also the country's most international and open city. This is attributable to its prosperous and colonial past before the change of government in 1949. It was among the first ports forced open by international powers in the mid-19th century.<sup>6</sup> After 1978, as China opened up to trade and began the transition to a market economy (the "socialist market economy"), Shanghai took on new approaches on almost all fronts, including education.

Shanghai was among the first cities to achieve universal primary and junior secondary education and was also among the first to achieve almost universal senior secondary education. According to the *Shanghai Yearbook 2009* (Shanghai Municipal Government, 2010), enrolment at the age of compulsory education was above 99.9%, and 97% of the age cohort attended senior secondary school (general and vocational). It is notable that enrolment in preschool programmes was 98%, already surpassing the new national preschool education goal for 2020.

There are many dimensions in education in which Shanghai has been a pioneer. In 1980, Shanghai was the first city in China to create vocational high schools, from which graduates were free to seek jobs. This was an unprecedented break from the job-assignment convention, which was an essential element of the planned economy. In 1985, Shanghai was also the first to launch its own version of the higher education entrance examination, starting the trend of localising the national selection system. As will be discussed later, Shanghai was also the first to implement neighbourhood attendance in primary schools, confronting the tradition of early competition and selection. Moreover, Shanghai was among the first cities in China to aim at an all-graduate teaching force.

Statistics show that over 80% of the city's higher education age cohort are admitted into higher education in one way or another, compared to the national figure of 24% (Ding, 2010). In other words, all those who would like to attend higher education are able to do so. There were 61 institutions of higher education in Shanghai in 2009, plus quite a few private institutions yet to be officially recognised. There would be higher education over-supply if only residents of Shanghai were counted,<sup>7</sup> but Shanghai institutions also admit students from all over the nation.<sup>8</sup> Indeed, Shanghai has always been a preferred place to pursue higher education, perhaps second only to Beijing, and has attracted the best students from the national pool of elite candidates.

Although Shanghai is the most internationalised city on the Chinese mainland, cultural traditions in education still prevail. Popular support for education means the city has had little difficulty in launching universal education. However, Shanghai still struggles with undue examination pressure. Even with the very generous admissions quota for local students, the sense of competition is still very keen. Reformers had thought that when the system became less selective, undue competition would also be reduced. This does not seem to have happened. One possible interpretation is that parents and students still see the system as a vertical hierarchy<sup>9</sup> and everyone wants to be at the top. Indeed, educational institutions are ranked in parents' minds; this is part of the cultural legacy. By the same token, parents would like to see their children become top of their class, and anything less than 100% is perceived as undesirable (Stevenson and Stigler, 1992). Another interpretation is that the cultural tradition cherishes hard work, and that to "study" (or "reading books" in the ancient tradition) is a student's "responsibility". Parents and teachers like to keep students busy studying, and do not feel comfortable if students spend less time studying.

Hence, despite the increase in higher education opportunities, examination pressure persists in Shanghai as in other parts of China. And, as hinted at above, a belief in competition has also led to a tolerance of disparity. Chinese societies seem to see disparity as necessary in a hierarchical system where people compete to climb to the top. Shanghai has tried hard to work against these



adverse cultural influences in order to overcome this tolerance of disparity and to fight undue examination pressures. The city has encouraged and embraced many unconventional experiments during this search.

## How education is practised

There are two core dimensions to the practice of education in Shanghai: student engagement and the organisation of teaching.

### Student engagement

One of the most essential influences of China's cultural heritage is the intensity of students' engagement in learning. In a typical Shanghai classroom, students are fully occupied and fully engaged. Inattentive students are not tolerated. For example, in one typical mathematics lesson observed for this research, students at Junior Secondary II were learning about parabolas. Students covered 15 problems at their desks, and selected students gave blackboard demonstrations. This is rather different from classrooms in other cultures, where students may not be required to be fully engaged or attentive throughout the entire lesson; and the amount of work expected is seldom comparable.

Such intense concentration is perhaps due to the heavy examination pressure and the accompanying culture of diligence. After all, to "study" is regarded as students' responsibility, and having a large quantity of work is often seen as a proxy for working hard. When local educators are asked about the phenomenon, their first response is often one of surprise – "why not?". Probing further often leads to explanations that working hard is a virtue. In Chinese society, when a student is not doing well in school, the usual explanation is that the student is "lazy"; ability is seldom blamed.

Student engagement in learning is not limited to lessons. Homework is an essential part of their learning activities and governs their home lives after school. Parents expect students to do homework every evening and are prepared to devote their family lives to student study, as ancient tradition dictates. In other words, the family is ready to sacrifice everything for their children's education. This is very different from other cultures, for example in the West, where school work is not supposed to "invade" private family lives.

The intensity of students' engagement goes well beyond school. As described in an interview with Zhang Mingsheng, former Deputy Secretary-General of the Shanghai Education Commission, there is a rather comprehensive "remedial system" of tutorial schools to help children with exam preparation. Although no formal statistics exist, it is estimated that over 80% of parents send their children to tutorial schools. Such schools are mostly for-profit, operate after school hours or at weekends, and tend to use small groups to focus on particular subjects. Parents see these tutorial schools as essential for enabling students to pass the public examinations with flying colours. Teachers are not totally against such schools either, because they also think that passing examinations is the prime aim of student study. Even parents who are against examination cramming often send their children to tutorial schools, almost as a matter of insurance. Those who go to such classes are not all weak students; even very strong students like to reinforce their strengths to achieve higher scores in the examinations.

Apart from this "remedial system", there is also a "supplementary system" of institutions or programmes outside schools, where young people can learn music, fine arts, sports, martial arts and all kinds of experiences not offered by schools. Parents are quite prepared to invest in these learning activities, even though they can be expensive.

Another tradition, since China started its schools in the early 20th century, has been to focus on student development in five dimensions – moral, intellectual, physical, social and aesthetic, in that order. Since 1949, this has evolved into moral, intellectual and physical. Students are expected to be fully developed in all three dimensions. Hence, students are expected to take part in all kinds of other activities (see Box 4.1). In Shanghai schools, for example, there is a municipal requirement that every student should engage in at least one hour of physical education every day. Students start with a morning exercise before class; there is an "intermission exercise" in the middle of the morning; and other physical activities are held after school. Some schools practise "eye exercises" where student massage essential acupuncture points in order to prevent eyesight deterioration. Students also engage in all kinds of extracurricular activities in sports and the arts, where they are expected to learn organisation and leadership. Students take turns at "daily duties" in cleaning the classrooms and nearby corridors, for example. Students are also assigned teamwork in keeping the campus tidy. They are also organised to visit rural villages or deprived social groups as a matter of social or service learning. All these activities are co-ordinated by the municipal education authority.

Compared with other societies, young people in Shanghai may be much more immersed in structured learning in the broadest sense of the term. The logical conclusion is that they learn more, even though what they learn and how they learn are subjects of constant debate. Critics see young people as being "fed" learning because they are seldom left on their own to learn in a way of their choosing. They have little direct encounters with nature, for example, and little experience with society either. While they have learned a lot, they may not have learned how to learn. Students are often overwhelmed by all these learning activities, both within and outside schools, and most of which are imposed on them.



The Shanghai government is developing new policy interventions to reduce student workload and to refocus the quality of student learning experiences over quantity. Challenges from a changed and changing society maintain tension between such intense engagement and genuine learning in the broader sense. The national mid- and long-term education reform and development plan, the *Outline 2020*, calls for “reducing student workload” as a major theme of reform (Ministry of Education of the PRC, 2010b; Box 3.6). Shanghai is already much more engaged of this issue than many other places in China. Good schools often refrain from holding classes during evenings and weekends, and parents do not normally press for heavier workloads. Homework is such a burden to students that many local authorities in China have stipulated a maximum amount of homework, measured in hours and depending on the students’ age, that schools are allowed to assign. Shanghai was among the first to impose such limits as a municipal policy.

#### Box 4.1 **Oriental Green Ark**

A spectacular facility established by the Shanghai Municipal Education Department is the education base known as the Oriental Green Ark. This huge education park occupies more than 60 000 acres and includes activity centres, physical challenge centres, military training, museums, villas and hotels, as well as a convention centre. The villas and hotels follow the concept of a global village, with each block in the style of a particular nation. Every student in Shanghai primary and secondary schools experiences the Oriental Green Ark at least once as an organised school visit. Many parents also send their children to the Ark through individual bookings at their own cost. Children see it as an alternative amusement park.

### **Teaching and teachers**

#### **Organisation**

As in other parts of China, Shanghai has developed a rather rigorous framework and system of teaching. At the grassroots level, subject-based “teaching-study groups” engage in study and improvement of teaching on a daily basis. For example, a physics teacher of Senior Secondary 2 (SS2) involved in a teaching-study group typically teaches 12-15 classes per week, teaching only one programme and nothing else. There are timetabled sessions when the study group meets, often with related personnel, such as laboratory assistants, to draw up more detailed lesson schemes for a particular topic the following week. Teachers are expected to teach according to the scheme, which is then translated into more detailed lesson plans by and for individual teachers.

The lesson plan serves not only as a guide for the teacher during the lesson, but also as documentation of the teacher’s professional performance. In many cases, teachers are observed by the school principal or by district education officers when they are being considered for promotions or awards. In short, a Chinese teacher sees a lesson more as a show or a performance, and puts in many hours of preparation to cover the standard 40-minute period.<sup>10</sup>

The “teaching-study group” is supervised for each of its subject areas by the “teaching-study office” in the Education Bureau (in a rural country or city district), which is, in turn, supervised by the relevant “teaching-study office” in the Education Department in the provincial or municipal government. Professionally, all these “teaching-study” setups work under the Basic Education Department II within the central government’s Ministry of Education. The Basic Education Department II is charged with all matters related to curriculum development, textbook production, pedagogy enhancement and school management for the whole nation. In this way, teaching in China is centrally organised.

Teachers may observe each other or may be observed by peers (for example, when teaching a new topic due to a change in the curriculum), by new teachers (so they can learn from more experienced teachers), by senior teachers (for mentoring), or by the school principal (for monitoring or for development purposes). Sometimes, teachers are expected to teach demonstration lessons, called public lessons, for a large number of other teachers to observe and comment upon. This structured organisation of teaching in China is thus not only a means for administration; it is also a major platform for professional enhancement.

Classes in mainland China are generally large: the national norm is 50 students. However, in rural or suburban areas where good schools are sparse, it is not unusual to see classes of over 80 or, in extreme cases, over 100 students. Parents often indicate their preference for better schools and better teachers over smaller classes. However, in Shanghai, as in other major cities, recent drastic declines in population have forced local governments to adopt small classes so as to minimise teacher layoffs. As is the case elsewhere, the actual effects of small classes are still under debate. Nonetheless, small classes have created room for new pedagogy by introducing student activities that would be impossible in large classes.



### **Qualifications and professional development**

Recently, Shanghai has upgraded the qualifications required of teachers, and is moving towards an “all graduate, all trained” teaching force. This has meant a major reorganisation of the teacher-training institutions. The in-service College of Education has also been merged into the normal universities, although the effect of this is subject to some debate. At present, all primary school teachers must have a sub-degree diploma, and all teachers in secondary schools are degree-holders with professional certification. Many teachers also have master’s degrees.

Shanghai was the first province in China to require continuous professional development for teachers. Every teacher is expected to engage in 240 hours of professional development within five years. This rigorous system of professional development and pedagogical advancement means that teachers are perceived as autonomous professionals, and hence continuous enhancement of their individual professional capacities is emphasised. This is very different from pure performance-based monitoring, where teachers’ teaching productivity is entrusted to control mechanisms further up the hierarchy. In other words, teachers in China are fundamentally regarded as “generals” who can independently handle teaching and face any difficult student situations. This is very different from other systems where teachers are regarded as “staff members” or “foot-soldiers”, subject to commands and directives, and are expected to perform according to standard indicators. Thus, in contrast to a system where only a handful of principals or superintendents play the “general”, there are millions of “generals” in China.

Teachers in Shanghai, as part of a national system, are classified into four grades as an indication of their professional status. Promotion from one grade to the next often requires the capacity to give demonstration lessons, contribute to the induction of new teachers, publish in journals or magazines about education or teaching, and so forth. Of course, many other aspects of education are unique to China, but the teaching protocols are perhaps among the most relevant to this chapter.

While teachers in mainland China do not receive very high salaries, they often have other significant income on top of their salaries. This may come from additional assignments beyond normal responsibilities, income generated outside school, such as from private tutorials or invited talks, or school “bonuses” (e.g. sponsoring fees collected from students who come from other neighbourhoods or whose test scores are below the official admissions cut-off). In major cities, such as Beijing and Shanghai, where the economy is more open and incomes fluctuate more, teaching stands out as a preferred occupation because it guarantees a more stable income than many other professions. Over the years, because of the improvement in teachers’ salaries, teaching has risen up the ladder of preferred occupations.

This picture of teaching in Shanghai would not be complete without mentioning that almost all the officers in the government education authorities, both at municipal and district levels, started as school teachers. Most of them distinguished themselves as teachers or school principals with strong track records at the grassroots. This perhaps explains their devoted professional attention to teaching and learning amidst all the administrative chores and political issues they normally contend with. They manage, however, to maintain this teaching focus while at the same time relying on a strategic vision that enables them to navigate a policy arena well beyond education.

### **Reform strategies: from teaching to learning**

All aspects of education are being, or have been, reformed in China and in Shanghai. There are reforms in curriculum, assessment and examinations, pedagogy, and teacher preparation, all aimed at enhancing the quality of education. However, crucial to all is the reform in assessments and examinations. In a culture where exams are of such central concern, Shanghai reformers see examinations, particularly public examinations, as preventing all the other reforms from having their maximum impact.

#### **Curriculum reform**

At the national level, a major curriculum reform was heralded by a document issued in 2001, which called for schools to:

- move away from pure knowledge transmission towards fostering learning attitudes and values;
- move away from discipline-based knowledge, towards more comprehensive and balanced learning experiences;
- move away from pure “bookish” knowledge and to improve relevance and interest in the content of a curriculum;
- move away from repetitive and mechanistic rote-learning towards increased student participation, real-life experience, capacity in communications and teamwork, and ability to acquire new knowledge and to analyse and solve problems;
- de-emphasise the screening and selective functions of assessments and instead to emphasise their formative and constructive functions; and
- move away from centralisation, so as to leave room for adaptation to local relevance and local needs (Ministry of Education of the PRC, 2001).





These principles are by no means political slogans or academic jargon. They apply not only to the curriculum, but also to pedagogy in the classrooms, as well as the entire system. These principles point to a new direction, running counter to the old traditions, to conventions of the former planned economy, as well as to tacit assumptions about education.

Concrete changes include dilution of the disciplined structure of “subjects” so as to re-organise content according to life relevance and progression in learning; the introduction of new integrated contents at the nexus between natural sciences and humanities; the creation of elective arts modules as a compulsory part of the curriculum; changing examination formats from fact regurgitation to analyses and solutions for stated problems; and so forth.

Shanghai has always been seen as a pioneer in education reform, with reform of the curriculum taking centre stage. Curriculum reform in Shanghai follows the general framework of national reform. But Shanghai is often given the privilege of experimenting with reforms before they are endorsed for other parts of the nation. Since 1989, Shanghai has launched two waves of curriculum reform. Their essence has been to overcome “examination orientation” practices in schools in order to build quality education (Ding, 2010).<sup>11</sup>

The first phase of curriculum reform in Shanghai started in 1988, with an attempt to allow students to select courses of personal interest. A curriculum comprising three blocks was established: compulsory courses, elective courses and extra-curricular activities. Textbooks and teaching materials were produced and phased in accordingly.

Curriculum reform moved into its second phase in 1998, with the aim of integrating natural sciences with the humanities, the national curriculum with school-based curricula, and knowledge acquisition with active inquiry. The purpose was to transform students from passive receivers of knowledge to active participants in learning, so as to improve their capacity for creativity and self-development and to fully achieve their potential. Traditional subjects were re-organised into eight “learning domains”: language and literature, mathematics, natural science, social sciences, technology, arts, physical education, and a practicum.

Schools were encouraged to make their own curricula specific to their conditions. Museums and other “youth education bases” (such as the Oriental Green Ark, Box 4.2) have now become crucial places in which the new curriculum is implemented.

The new curriculum has three components: the *basic curriculum*, delivered to all students, mainly through compulsory courses; the *enriched curriculum*, which aims to develop students’ potential and is realised mainly through elective courses, and an inquiry-based curriculum, which is mainly implemented through extra-curricular activities. The *inquiry-based curriculum* asks students, backed up by support and guidance from teachers, to identify research topics based on their experiences. It is hoped that through independent learning and exploration, students can learn to learn, think creatively and critically, participate in social life, and promote social welfare. Since 2008, the new curriculum has been implemented throughout the city.

Overall, the curriculum reform involves broadening students’ learning experiences, enhancing the relevance of subjects by relating them to broader human and social issues, and concentrating on the development of “capability” rather than the accumulation of information and knowledge. What is unprecedented in the reform is the intention to promote creative and independent thinking, which is very much against the collective and submissive tradition of Chinese culture. These are reflected in the reform of both examinations and pedagogy.

In order to facilitate the sharing of good practices of curriculum design, development and implementation, a web-based platform<sup>12</sup> was constructed and put into use in 2008. Included on the website are resources for curriculum development and learning, success stories of curriculum implementation, and research papers on teaching and learning. However, reform does not stop there: a draft version of Shanghai’s plan for educational reform and development to 2020, which has been put out for public consultation, calls for school-based curricula and proposes a credit system at the senior secondary level to make learning more individualised and flexible (see later section).

### **Assessment reform**

In China, examinations remain a major barrier to reforming student learning. Shanghai is no exception. No matter how well the curriculum reform is designed and explained, and no matter how committed teachers are, they feel unable to do anything about the examination pressure, shaped as it is by the broader culture and the pragmatic approach of students. Despite the general belief that emphasis on examinations jeopardises the genuine development of young people and is detrimental to the entire national population, social pressures have driven teachers to submit. Educators cynically describe the situation as follows: “High-sounding appeals for quality education, down-to-earth preparation for examinations.”

Given this context, instead of eliminating or reducing examinations, Shanghai has chosen to modify them so that they serve a better purpose. If ones see public examinations as the baton that conducts the entire symphony of school lives, rather than removing the baton, Shanghai has decided to modify the baton so that it conducts good music.



Since 2001, the higher education entrance examination in Shanghai has taken the form of “3+X”: the three core subjects of Chinese, English and mathematics, plus the “X” of any other subject(s) as required by individual institutions or faculties. The “X” component may take the form of paper-and-pencil examination, oral examination, test of practical skills and so on. The content may cover one discipline, one kind of ability, or several disciplines or abilities in integration. Individual institutions decide on the weighting of the three core subjects and the “X” component. For example, at Shanghai University for Science and Technology, the three core subjects contribute to 40% of the candidate’s overall scores and the “X” component is 60%.

From 2006, higher education institutions in Shanghai started to organise their own entrance examinations and set their own admission requirements (Shanghai Municipal Education Commission, 2008). The overall trend and intention is to diversify higher education entrance examinations so as to reduce the pressure from a single uniform exam. To lower exam pressures further, Shanghai has moved to allow admissions based on school recommendations at both senior secondary and university entrance levels. Other selected institutions, presumably the stronger, have also been given the autonomy to set their own admission criteria and entrance examinations. More recently, students have been allowed to recommend themselves for admissions at higher levels of education – and universities are now willing to consider such self-recommendations.

As part of the reform, Shanghai created a Record of Growth of Primary and Secondary School Students in 2004. This is a student portfolio which combines various evaluation aspects, such as basic, enriched, and inquiry-based curricula, and moral conduct. Methods of evaluation included quantitative and qualitative analysis, self-evaluation and peer evaluation. This is seen as major step to move away from taking examination scores as the sole indicator of student performance.

However the reform in examinations is most noteworthy in the introduction of new concepts and approaches in the mode of assessments. From Grade 7 on, teachers begin to set integrated papers that cross disciplinary boundaries and test students’ capacity to apply their knowledge to real-life problems. Students are provided with a hypothetical situation and are asked to analyse and comment on the situation from multiple perspectives. For example, the situation might be the dramatic increase in the number of private motor cars. An analysis could include the consumption of metals, increase in traffic, human habits, income-tax implications, employment of workers, etc. As another example, questions provide students with information not covered in the syllabi to test their analytical abilities or skills in processing new information for insights or problem-solving. Multiple-choice questions have basically disappeared from assessments and public examinations. All these are seen as important moves to free students from rote learning and to cultivate abilities in independent thinking and creativity, to “integrate their talents”.

Hence, it would be fair to say that teachers in Shanghai have moved to change their assessments to approaches and modes which are more conducive to integrated learning. In this study, when teachers who had no experience with PISA were asked about and understood the nature of the PISA tests, many of them responded: “That is more or less what we are doing!” There has apparently been a genuine paradigm shift among teachers about assessments and examinations, but in a culture that reveres examinations. However, educators and researchers comment that the changes to assessments are more effective within schools than in public examinations. There is an interesting paradox here. On the one hand, teachers and schools have moved ahead to more advanced thinking about assessments for authentic learning, and have mastered the expertise in practising such assessments within schools. On the other hand, the public examinations are only taking slow steps, and heavy examination pressure remains.

### **Pedagogical reform**

Alongside the curriculum reforms have come changes to pedagogy. One very significant change has been implemented in recent years through the slogan “return class time to students”. This involves allocating more time to student activities in classes and less to lecturing by teachers. This has caused a fundamental change in the perception of what a good class should look like. Once typified as involving well-designed presentations by teachers, videos of model teaching concentrated on teachers’ activities. Now, model

#### **Box 4.2 The principle of multiple approaches**

In a typical lesson to introduce addition of fractions, the teacher did not start by directly providing the methods of “common denominator”. Instead, she asked students to compare two fractions:  $\frac{4}{5}$  and  $\frac{3}{4}$ . In a matter of around 15 minutes, student came up with five different ways of comparing the two fractions: drawing pies, drawing bars, subtracting from 1, common numerator, and common denominator. The teacher then introduced common denominator as one of the convenient ways of adding two fractions with different denominators. The principal said that in the conventional classroom, it normally took two to three weeks before students could master the method. Now, all are mastered within one lesson of 40 minutes.



classes are filmed using two cameras, one of which records student activities. Teachers' performances are now also evaluated by the time given to student participation and how well student activities are organised.

A similar slogan is "to every question there should be more than a single answer". This poses a challenge to the orthodoxy and authority of teachers over the information they teach (Box 4.2).

These add up to a sea change in classroom pedagogy. The use of slogans is a Chinese tradition, carefully crafted to capture the essence of the proposed change, yet to be easily understood and followed by grassroots teachers. This is particularly powerful in rural schools, where most theories are still foreign ideas. The use of slogans in pedagogy reform is also based on the culture of what could be called "constructive conformity" in China. That is, teachers do not mind replicating other teachers' good practices, and indeed creative practices are meant to be copied. This is very different from the meaning of creativity in other countries, where practices are called creative only when they are different from others.

The changes in teacher and student activities in classes are a fundamental deviation from the Chinese tradition in pedagogy. It has been a huge step changing from a focus on teaching to a focus on learning. Student participation in classrooms is a pretty new idea to most teachers in China. It challenges and changes teachers' authoritative role as the knowledge controller. However, these changes in classroom practices have allowed students to generate their own paths of learning, and hence creativity and independent thinking.

The reform in pedagogy has caused a fundamental change in the teacher-student relationship. It has empowered students in the process of learning and in the creation of knowledge. As a result, classrooms have become more liberal in terms of student thinking, despite the intensity of activities and strict discipline.

### ***Reforms to eliminate disparities***

Strong performance in PISA means not only good individual student performance, but relatively small disparities among individual students.

In recent years, China has joined the international community in realising the importance of overcoming inequities in education – and in society at large. This is of particular significance since success in the overall reform has been based on a break from the extreme egalitarianism that prevailed during the Cultural Revolution. Deng Xiaoping pursued the concept of "let a few become rich first". Disparity was at that time seen as an incentive to the growth of national wealth and a cure to national poverty. However, over the past 30 years of development, the uneven growth in the nation has given rise to significant inequality and disparity between different areas, and within regions. As a major metropolitan area where wealth accumulates, disparities within Shanghai can be quite stark.

### ***Neighbourhood attendance***

In 1994, Shanghai was the first city in China to introduce neighbourhood attendance at primary and junior secondary levels, requiring students to attend their local schools and, in effect, eliminating the notion of key schools at these levels. This was a challenge to society and caused some unease among parents, who were bewildered that their children could no longer compete for admission to the best schools. The social pressure was so great that eventually a compromise was reached: students could choose schools in other neighbourhoods by paying a sponsorship fee. This is often known as the Chinese version of "school choice," which was then a hot issue in America. Parents see the additional fees as fair, because otherwise preferential admissions could go to parents with political power or personal connections.

Neighbourhood attendance also prompted concern among teachers who were not used to teaching classes of students with mixed abilities. Now, however, teachers seem to be proud of being able to handle children of diverse backgrounds and different abilities, realising that diversity and disparity within schools are common features in contemporary societies. Neighbourhood attendance has allowed public examinations to be removed at the end of primary schooling, releasing primary teaching from examination pressure. As an immediate result, innovations and creativity now flourish in primary schools. Policy makers often see this as an essential factor in making Shanghai a champion of curriculum and pedagogy reforms.

### ***A belief in the value of effort***

The cultural heritage of believing in effort over innate ability can be positive. Shanghai is home to quite a few experimental programmes. One such example is "success education" which illustrates how hard work and innovative approaches can improve results for poor performing students (Box 4.3).

### ***Migrant children***

Neighbourhood attendance also prepared the school system to face the challenges of educating migrant children. In the 1980s, migrant workers flooded in from rural villages to work in urban areas. Most are low-wage labourers in factories, while others are



### Box 4.3 Success education

In 1999, Liu Jinghai, originally an educational researcher, started an experiment in the Zhabei city district, a relatively underdeveloped area of Shanghai. He took over a junior secondary school (School No. 8) and decided to admit only the lowest performers from primary schools. In a matter of two or three years, his graduates were becoming renowned for their success at getting into the best senior secondary schools. His strategy is to start at low levels and move in quick but small steps. His basic belief is that all students can learn, and learn well. It is a matter of persistent effort and new approaches. This is a reaction to the teachers who stereotype students and make them believe that they could not succeed. Liu is now being asked to take over nine more schools to have them follow the same philosophy.

Source: Author visits to the school in 2003 and 2009.

contract workers on construction sites. Still others created small businesses to tap into the urban market. Migrant workers have contributed immensely to China's economic growth, but educating their children has become a national challenge.

One problem has been the shortage of supply, because local schools had not prepared spaces for migrant education. Second, given the keen competition among schools, migrant children, who are often less academically prepared, are not welcomed by local schools. Third, local governments were reluctant to spend taxpayers' money on the children of non-taxpayers. Fourth, some local parents do not like to see migrant children in their children's schools because they fear they will lower standards and be disruptive.

To date, around 30 million children of school age belong to migrant families all over China. This is 20% of the entire student population at the basic education level. In other words, one in every five school children comes from a migrant family. About 20 million are with their parents in cities, but the other 10 million have been left behind in villages without parental care. Both categories pose serious educational as well as social problems and have become a major issue on the government's agenda. They are also one of the major issues China pledged to tackle in its 2020 education plan. Since 2002, national policy on education migrants has been based on two statements, known as the policy of "Two Mainly": "Education of migrant children is mainly the responsibility of the recipient city", and "Migrant children should be educated mainly in public schools."<sup>13</sup> The national policy is interpreted differently in different cities.

Shanghai is one of the principal recipients of migrant workers because of its active industrial and commercial economies. Statistics in 2006 indicated that 80% of migrant children were of school age, and those who studied in Shanghai schools were 21.4% of the entire student population at the basic education level (Ding, 2010). There are largely three approaches to educating migrant children. First, admit migrant children into conventional public schools and let them mix with the local students. Second, start new public schools catering mainly for migrant children. Third, establish private schools for the migrants. Shanghai is among the cities that accommodates migrant children. It has established the notion that migrant children are "our children" and works constructively to include them in its educational development. Meanwhile, at the system level, the admission of migrant children to public schools helps solve the problem caused by the acute decline of school-age children among the permanent residents.

The city's spectacular economic growth can be very much attributed to the contribution of migrant workers. It follows that their children should be well treated. Gu Lingwan, former Deputy Director of the Shanghai Academy of Educational Research, a renowned teacher and reformer in mathematics education says: "Shanghai has historically always been a city of migrants. Children of the migrants today will stay on and become *bona fide* citizens of Shanghai. How they are treated today will determine how they feel towards and contribute to the future of Shanghai".

It is noticeable that in PISA 2009, the rigorous sampling did reflect the presence of the migrant children in the system.

#### **Strengthening weak schools**

Although basic education is free and compulsory, the quality of schools varies, and that affects the quality of education children receive. Indeed, public schools in Shanghai have long been criticised for the disparity among them. In order to reduce this disparity, the Shanghai government has adopted several strategies:<sup>14</sup>

- **School renovation.** The government evaluates schools in terms of their infrastructure and educational quality, and then classifies them into four levels according to the degree to which they meet the standards. Since the 1980s, several rounds of school renovation attempted to ensure that schools were in sound physical condition. In the mid-1990s, the demographic decline began to show, which gave the government a good opportunity to further improve the schools (Jin, 2003). In 1999, Shanghai started a second wave of school renovation, upgrading school buildings and facilities according to a "standard programme". A total



of 1 569 schools were either re-organised or closed, accounting for three-quarters of all schools in Shanghai. A third wave of school renovation started in 2002, from which one-third of junior secondary schools in Shanghai benefited. The second and third rounds included other reform measures, such as strengthening the team of teachers or selecting a strong principal. By 2005, all the lowest performing schools had been eliminated. In junior secondary education, 64% of public schools have now reached the highest level.

- **Financial transfers.** The mobilisation of public funding with positive discrimination. Statistics showed that per-student expenditure in rural areas was only 50% to 60% of that in the city. Rural schools also had far lower capital spending than downtown schools on average (Shanghai Municipal Education Commission, 2004). The strategy was then to set a minimum standard for per-student public expenditure at different levels, and to transfer public funds to the deprived areas. With the improved economy, the Shanghai municipal government has been keen to help households support children's education. Since 2006, all students in compulsory education have been exempt from tuition and miscellaneous fees. Since 2007, all students in compulsory education have been provided with free textbooks and exercise books (Shanghai Municipal Education Commission, 2009). All these equity measures echoed the national policy of government subsidy of non-tuition expenses for students from poor families.
- **Teacher transfers** from urban to rural areas and *vice versa*. It was often difficult for rural schools to recruit teachers, and they also suffered from high teacher turnover. To reverse the situation, the government transferred a considerable number of teachers from urban public schools to rural schools, along with some outstanding urban principals. Meanwhile, young and middle-aged principals and teachers from rural schools were transferred to urban schools. They are expected to return to the rural schools, bringing their new urban experiences with them (Shanghai Municipal Education Commission, 2008).
- **Pairing off** urban districts with rural districts. In 2005, the educational authorities of nine urban districts signed three-year agreements with educational authorities of nine rural districts, so that the former could help strengthen the latter. Moreover, some 91 schools paired up as sister schools, and a substantial number of teachers undertook exchange programmes among the sister schools. The first round of the three-year "pairing off" programme ended in 2008, and the second round is under way (Shanghai Municipal Education Commission, 2009).

#### Box 4.4 The Qibao Education Group

Qibao is a suburb of Shanghai. Its secondary school, established in 1947, has become known for the humanist values that permeate all aspects of school life. It is also known for the percentage of its graduates admitted to good universities. Some graduates from Qibao have been directly admitted to Harvard University. Since the 1960s, Qibao Secondary School has been identified as an "experimental school" or a "demonstration school" because of its effective leadership, and it has become famous in the realms of science education, sports, arts and music, and technology. Under the leadership of Principal Qiu Zhonghai, the Qibao Education Group was established in 2005 with Qibao Secondary School as the core. To date it hosts six schools. Three other public schools were renamed and "adopted" by Qibao, while two private secondary schools, one junior and one senior, were newly established by the group. All six schools have demonstrated continuous improvement since becoming members of the Qibao Group.

Source: Focus group discussion with administrators of the Qibao Education Group, 2010.

- **Commissioned administration.** This relatively new strategy has gained increasing attention. It is a kind of school custody programme in which the government contracts "good" public schools to take over the administration of "weak" ones. Under this scheme, the "good" public school may take over the principal ship of a rural school, strengthen its leadership by appointing experienced teachers to the leadership, or sending experienced teachers to strengthen the teaching in the rural schools. It is believed that the ethos, management style and teaching methods of the good schools can in this way be transferred to the poorer school. The city government bears the cost of the partnership (Shanghai Municipal Education Commission, 2008). Such an arrangement not only benefits the poor schools; it also gives the good schools more room to promote their teachers.<sup>15</sup>
- **Establish a consortium of schools,** where strong and weak schools, old and new, public and private are grouped into a consortium or cluster, with one strong school at the core (Box 4.4).

### Achievements and challenges

Shanghai's high performance in PISA 2009 (Table 3.1; OECD, 2010) is encouraging for Shanghai educators, and suggests that their reforms are paying off.



There is consensus among all those interviewed (see list at end of chapter) about the positive impact of the reforms, particularly changes in student assessments. Local experts believe that students are now exposed to a much broader knowledge base and are trained to integrate their knowledge and tackle real-life problems. Students have also become used to identifying questions of interest to themselves, and to making open-ended explorations. All these changes are markedly different from the traditional Chinese approach in which students learn subjects by heart and regurgitate such knowledge in examinations.

**Table 4.1 Shanghai-China's mean scores on reading, mathematics and science scales in PISA**

	PISA 2000	PISA 2003	PISA 2006	PISA 2009
	Mean score	Mean score	Mean score	Mean score
<b>Reading</b>				556
<b>Mathematics</b>				600
<b>Science</b>				575

Note: Shanghai-China did not participate in PISA 2000, PISA 2003 and PISA 2006.

Source: OECD (2012).

However, none of the interviewees was completely satisfied with the quality of Shanghai's education. As one experienced educator insightfully expressed it, the changes in student learning were brought about chiefly by organised and structured top-down reforms, implemented either through examinations or policy shifts.<sup>16</sup> Such measures may be well-designed, but students are still not given much autonomy in their study. There is no encouragement for individuality, and hence students' times are still almost fully occupied by learning tasks assigned either by the school or by parents.

Indeed, the conformity and uniformity are not limited to students. Schools with outstanding and extraordinary characteristics are still rare. That is, there are stronger schools, but there are no "alternative schools" with alternative philosophies and goals, and unconventional approaches and strategies, as could be seen elsewhere, even in similar cultures such as Korea or Japan. Examination results are still predominantly the goal for school education.

Looking to the future, Shanghai is now striving to turn itself into a "First Class City". The notion of a First Class City is rather vague, and its definition varies in the literature, but reflects much of what has been said in recent years about enhancing the service sector in the economy and building Shanghai into a world financial centre.

Education reforms are very much part of this endeavour, reflected in the slogan "First Class City, First Class Education" (Hu and Jiang, 2002). Implicit in the slogan is a strong sense of preparing manpower as the core value of educational planning. This is true for the whole of China, where education development and reform are often expressed in the Chinese term *peiyang rencai*. "Peiyang" means cultivation, as in growing a plant. "Rencai" literally means "human talents", referring to people who are "useful" because of their skills. It is similar to the notion of human resources, except that *rencai* is a more comprehensive term not always confined to economic interpretations. Here, human beings are valued according to their usefulness to society. This value system is quite common to the collective cultures of Confucian societies.

In the Shanghai context, the emphasis is now on how to foster "integrated talents" (*fuhexing rencai*). The term reflects a new conceptualisation of human resources adapted to the challenges of the future. Sometimes it refers to multi-tasking abilities, or adaptability to changing requirements, or the ability to master a range of different expertise. The notion of integrated talents is used quite often in the literature, and especially in policy documents. There is much in the discourse about the cultivation of integrated talents, and education is regarded as the essential means for such cultivation. The notion of integrated talents is further developed in the recent national education blueprint *Outline for Medium and Long-term Development and Reform of Education (Outline 2020)*, announced in July 2010 (Ministry of Education of the PRC, 2010b; Box 3.6). This calls for the cultivation of "selected top-notch creative talents", and adds the elements of "competitiveness" and "creativity" into previous definitions of talents. This perhaps represents that official definition of the new talents which future society will need, and for this it will need a new form of education.

If we add all these together, a comprehensive approach is emerging, bound together by a consistent philosophy which, as with Chinese culture in general, is not always explicit in the documents:

- Education has to serve the needs of national development (and municipal development for that matter). In today's world, such needs involve "top-notch creative talents". This requires individuals who are creative, competitive, integrative and able to multi-task. These talents for the future can only be cultivated in an education system which is liberalising and empowering in its outlook.



- The foremost task in achieving such an education system is to liberate students from the undue workload caused by the public examinations. This is being achieved not so much by reducing examinations, but by changing the aims and modes of publication examinations and internal assessments.
- The strategic first step is to expose teachers to new assessment concepts. Shanghai reformers have borrowed heavily from PISA's goals and design. The existing system of teachers' professional development plays a crucial role in disseminating and practising the basics.
- Students are already changing their learning styles, and have much broader learning experiences than the formal curriculum offers..

## HONG KONG-CHINA'S EDUCATION SYSTEM: ONE COUNTRY, TWO SYSTEMS

Hong Kong-China was originally a small fishing island that was ceded to the British government in 1842 after China's defeat in the Sino-British War ("The Opium War"). In further treaties in the late 19th century, China also lost the Kowloon Peninsula and the New Territories to Britain on a 99-year lease. Hong Kong-China maintained its colonial status at the end of the Second World War when all other "unequal treaties" with China were terminated. In 1997 the 99-year lease ended. Following a surprise suggestion from Deng Xiaoping to British Prime Minister Margaret Thatcher, Hong Kong-China's sovereignty was returned to China under the "one country, two systems" notion.

Under this arrangement, China resumed its sovereignty over Hong Kong-China in 1997, but Hong Kong-China remained a separate jurisdiction, governed by a "Basic Law" and enjoying autonomy in all areas except military defence and diplomatic relations. As a Special Administrative Region of China (SAR), Hong Kong-China maintains policies of its own, independent from the national government in Beijing. In the case of education, for example, Hong Kong-China maintains its own system of education under an Education Bureau (EDB) which reports only to the Hong Kong-China government and Hong Kong-China taxpayers, without direct relations with the Ministry of Education in Beijing. Meanwhile, Hong Kong-China is free to engage in bilateral relations with other jurisdictions and assume membership in other international organisations for finance, commercial, education, culture and so forth. Hong Kong-China's education system has been and remains quite distinct from that of the rest of China, with a unique history, structure and reform trajectory.

Hong Kong-China has a population of around 7 million living in a small area of 1 000 square kilometres with an average GDP per capita (2011) USD 34 457 (Figure 4.3), putting it among the world's top ten richest nations on most lists.<sup>17</sup> The service sector of the economy accounts for 92% of Hong Kong-China's economic growth (Census and Statistics Department of Hong Kong-China, 2010a). Across the border on the Chinese mainland, an estimated 80 million people work for Hong Kong-China investors.

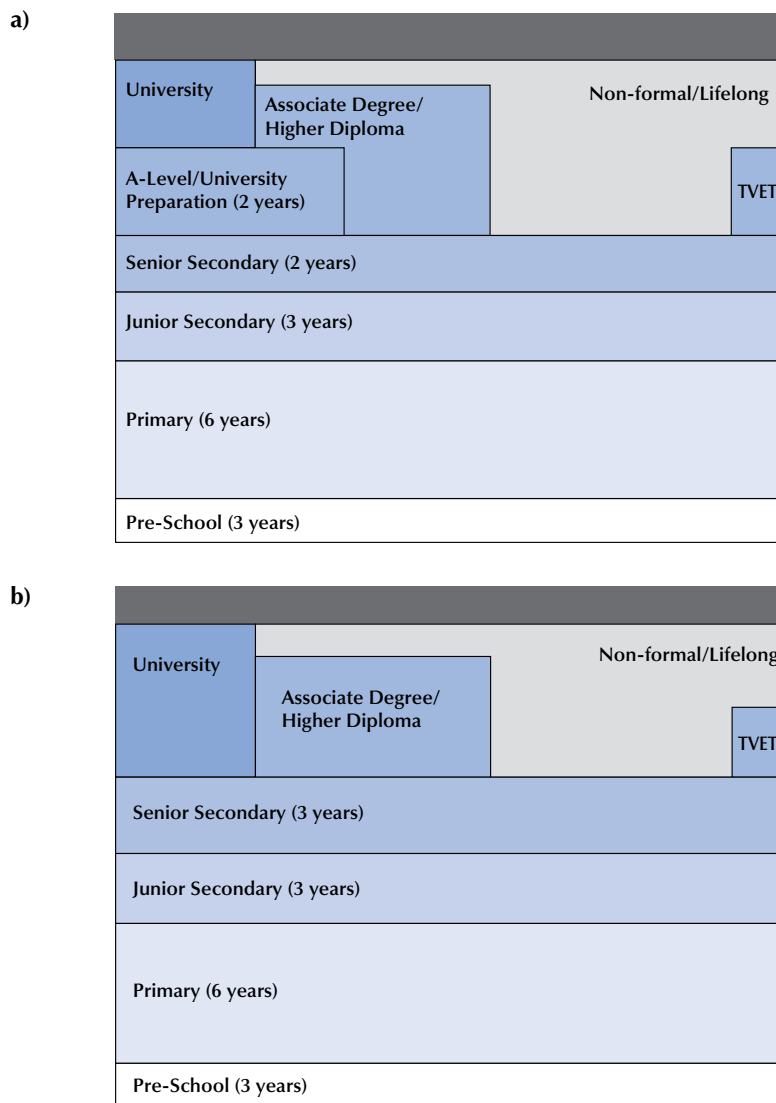
The population is predominantly ethnic Chinese who increasingly come from mainland China, either as immigrants who stay on or as tourists or migrants who reside in Hong Kong-China temporarily. Small but significant portions of the population are from Indonesia and the Philippines, mostly with temporary permits to work as domestic helpers. Traditionally, long-term residents of South Asian origin include businessmen from India, manual or service workers from Pakistan and former Gurkhas from Nepal. The Caucasians from Western countries living in Hong Kong-China mostly work for influential multinationals or as professionals or academics. Hong Kong-China residents, both men and women, have life expectancies that are among the longest in the world.

Hong Kong-China's education system comprises around 1 100 schools. However, the number is shrinking because of dramatic declines in population. Each age cohort has declined from around 9 000 members in the early 1980s to around 4 000 in recent years. The fertility rate is around 0.9 children per woman – far less than the "replacement" level of 2.1 children per woman (Census and Statistics Department of Hong Kong-China, 2010b and c).

The education system in Hong Kong-China has not followed the national pattern on the mainland. It is very much part of the British colonial legacy. Not only does Hong Kong-China follow the British O-Level and A-Level system, it has even adopted various policy changes made in England and Wales. However, since the 1970s, there has been a strong tendency to develop a more local identity, and policies began to depart from British trends. In a way, that prepared Hong Kong-China for the major reforms started in 1999 after the return of Hong Kong-China to Chinese sovereignty in 1997. The following are diagrams of the Hong Kong-China education system, before and after 2012 which is the dividing line for the reform in the structure.

In 2009, when PISA was conducted, Hong Kong-China's education system was still very much part of the British colonial legacy. The school system still maintained the British approach of five-year secondary schooling (Forms 1-5) culminating in a Certificate of Education Examination. The certificate is a gateway for all young people, either to work or further study. It is followed by a two-year matriculation education (known as Forms 6 and 7) in preparation for the A-Level examinations for admissions to higher education.

■ Figure 4.2 ■

**Hong Kong-China's education system: (a) before 2010 and (b) following reforms in 2012**

\* Technical and Vocational Education and Training.

Source: OECD (2012i).

However, this system is undergoing major re-structuring from the British 6+5+2+3 approach to a 6+3+3+4 approach, similar to many other systems in the region (Figure 4.2). This will be further discussed below.

### Evolution of Hong Kong-China's education system

While the school system on the Chinese mainland only began following the abolition of the Civil Examinations in 1905, Hong Kong-China already had schools in place long before that and they were not influenced by changes on the mainland. The leading elite Hong Kong-China schools followed the model of the British “public” (i.e. private) schools, although the schools have largely been adapted to Chinese culture. This was also facilitated by localisation policies among the British colonies, particularly after the Second World War. Hence, it is fair to say that the Hong Kong-China education system is very much a hybrid of Chinese culture and British traditions and schools enjoy the best of both worlds.

Hong Kong-China moved into universal 6-year primary education in 1970, compulsory 9-year education in 1979, and free 11-year education in 2000. There is a small but strong vocational education component, under the Vocational Training Council, catering to post-compulsory as well as post-secondary young people. Attendance in secondary education is universal. Higher education remained elite until the 1960s. There was only one university, the University of Hong Kong-China, and the enrolment ratio was only around 1%. The ratio in 2009 was around 65%, with 18% in Type A programmes, and there were seven universities, one Institute





of Education, one Open University and one private university. The enrolment in higher education is still low compared with similar cultures, where there is “oversupply” of higher education places, such as in Taiwan, China, South Korea and Japan.

There have never been many government schools in Hong Kong-China. However, from the 1950s, the government started subsidising non-government, school-sponsoring bodies (mainly churches, charitable organisations and other associations or agencies) and with them formed a public school system. Many such schools once operated under marginal conditions (such as on the rooftops of public housing), but were given land and buildings in the 1970s and 1980s. Now they enjoy state-of-the-art facilities. In brief, the Hong Kong-China government provides most of the capital cost and almost the full recurrent cost of public schools, but expects the non-government sponsoring bodies to run them. The sponsoring bodies abide by a Code of Aid, a kind of contractual agreement with the government.

School quality varies, as is evident in the PISA findings in various years. There are attempts to provide the better schools with a “direct subsidy”, which is the same amount as given to other public schools, but direct subsidy schools are given more autonomy in spending, fee-charging and admissions. The direct subsidy schools are similar to the US concept of charter schools, except that there is no contract about performance.

### **Significant autonomy**

The Hong Kong-China school system provides a textbook case of how school autonomy and teacher professionalism shape a culture among schools that is conducive to effective student learning. They also illustrate the kinds of challenges and problems that can arise from such an approach.

Over recent decades, Hong Kong-China has developed a culture of “school-based” orientation, which gives schools substantial autonomy over governance, curriculum design, appointment of principals and teachers, and the admission and graduation of students. In the past two decades there have been further changes to the system, so that administrative inspections (by inspectors) have been replaced by periodic reviews (by peers); approval of curricula is no longer required by law; and political censorship has been removed from the law. This has been further reinforced in recent years by making school governance boards legal entities.

Hong Kong-China’s school system has always cherished its freedom and autonomy. The school-based culture and orientation are the major impetus for the energetic and diverse innovations that take place in Hong Kong-China schools. Despite the traditional culture of conformity and the pressure of a uniform examination system, few schools in Hong Kong-China look alike, and this trend is growing with the new reforms. The autonomy of schools has provided fertile ground for teachers to develop their professional self-esteem and self-motivation for continuous and voluntary renewal and improvements. However, the flip-side is that teachers complain about being bogged down by administrative chores and meetings that would be unnecessary in a centralised system with standard procedures. In addition, disparity grows with diversity. The culture and the system do not allow easy government intervention, such as in handling poor performing schools. There is never an expectation that the government would directly interfere in a school’s affairs.

Hong Kong-China still has quite a few elite schools whose graduates are favoured candidates for admission to the best universities in the world. It is notable that such students are not necessarily from wealthy families. Hong Kong-China strongly exemplifies the Chinese belief that young people achieve because of hard work, regardless of family background. However, its schools are not only strong in academic achievements; often they are also champions in sports and music. Many graduates of these schools have become leaders in higher education, mainly because of their training in self-governance in student organisations at schools. The Hong Kong-China schools breed leaders.

Private schools, many of them for-profit, mushroomed in the 1970s in response to the shortage of school places. Such schools tended to offer low-quality education and as a result gradually disappeared during the 1980s because of expansion in the public sector. Since the turn of the century, however, a new breed of elite private schools has been established as international schools, though admitting mainly local students.

Hong Kong-China’s schools have not always been so successful, however. The section which follows charts the reforms that have led to this strong situation in which the city find itself today.

### **The drive for reform**

In the late 1990s the discourse in Hong Kong-China shifted from one of expansion to one of “what should education offer”. The comprehensive education reform that began in 1999 emerged at a time of widespread dissatisfaction with the education system. Parents were not satisfied with the education schools were providing and many children were doing homework until almost midnight, and most of what they did was little more than regurgitation. They subjected their children, unwillingly, to tough competition in order to move to better schools. Those who could afford it sent their children to the international schools that were more liberal in their philosophies and where children seemed happier. Teachers in turn were dissatisfied with their students,



thinking standards and motivation were declining. Employers were also dissatisfied with the quality and calibre of graduates from local institutions, finding them less prepared to engage in an increasingly complex workplace. They were starting to recruit returnees from overseas.

In hindsight, this dissatisfaction can be explained by a few crucial factors. First, schools were unprepared for an intake that suddenly changed from a select few to almost everybody. The system now had greater student “mixability”, but teachers still maintained approaches generally used for teaching the elite, in which only the capable students would benefit and the slower students were abandoned. Second, the sense of responsibility changed following the introduction of compulsory education. Students had been blamed for performing poorly in schools they had struggled to enter. When education became compulsory, blame was laid on schools and teachers, for not helping students to achieve. Third, although there had been successful reforms in curriculum and pedagogy, the general environment still favoured a conventional curriculum and didactic teaching. This was reinforced by the highly competitive public examinations and keen selection process for higher education. Fourth, and perhaps most fundamental, employment patterns had undergone major changes. While young people with only a nine-year education could previously easily find employment as blue-collar unskilled labourers in manufacturing plants, such factories had mostly moved across the border into southern China where labour costs were much cheaper (thanks to China’s open policies). The corresponding expansion of Hong Kong-China’s service sector was accompanied by an expectation of greater knowledge in its labour force.

In sum, at the end of the 20th century, Hong Kong-China’s education system faced a multitude of structural crises, partly due to the efforts to accommodate more children and partly due to changes in society’s expectations for education. Seen from this perspective, the apparent failure of the system at that time was less a problem of government incompetence or ill-management than a demonstration of the widening gap between a rapidly changing society and the static approaches to education. The solution was not to do more and better of what schools had been doing, but to put education in a different framework. That was the starting point for Hong Kong-China’s comprehensive education reform which began in 1999 and continues today.

### **Matching reform to the needs of the workplace**

The reform was led by the Education Commission, the overseeing advisory body in education policies, and started with a “mobilisation phase”. Some 800 community leaders were invited to a major gathering to air their concerns. The meeting started with a presentation titled “Questioning Education”, which asked over 100 questions with no answers. Participants assumed the roles of parents, employers and corporate citizens, and expressed such anger that they fuelled the Education Committee with determination to never go back to the old ways. A subsequent campaign encouraged every school to establish a paper “tree of hope” onto which students hung tags with statements beginning, “I have a hope: Education should be ...”.

The design phase followed. A document was published that asked questions about the “Aims of Education”. It described recent changes in society and proposed a list of fresh aims for education. Upon public invitation, more than 40 000 suggestions were submitted. It became a community campaign and greatly enriched the Education Commission’s understanding of how society was changing and its implications for education.

Meanwhile, as part of the learning process, the Education Commission carried out a series of innovative consultations to aid their decision making. Major professional bodies were interviewed to solicit their views. A typical example was the Society of Accountants, which suggested that the best action for a university to take towards accounting was to “not teach it”.<sup>18</sup> Another study looked at manpower aspirations among the small and medium enterprises that were becoming the backbone of Hong Kong-China’s economy. This was a genuine learning process for the Education Commission, which was discovering that fundamental changes were occurring in society and the workplace, but that the general design for education had not kept pace.

The Education Commission also studied education reform in other systems, as well as patterns of lifelong learning in OECD countries,<sup>19</sup> and supply and demand in the local market for lifelong learning. The commission looked at ways to retrain the newly unemployed and visited trade unions in order to understand the trends of employment in various industries.

This preparatory process brought about the following realisations:

- Society has changed and is still changing. The economy is changing so quickly and so precariously that it would be impossible and irresponsible to conceive an education system that could prepare the specific manpower needed for economic development. Instead, education should concentrate on developing individuals’ generic capacity so that they are able to face any future challenges.
- The need for a focus on “individual development” and “generic capacity” was substantiated by a new understanding of the workplace. Most of the registered companies in Hong Kong-China are small: 94% of them have fewer than 20 employees. Strict rules and procedures are no longer the norm in small work units. Combined with a growing diversity in products and services, and the customisation of production, individuals now have to tackle much more wide-ranging and complex tasks, for which specific skills are not required. Furthermore, individuals change jobs and careers with incredible frequency.



- In this context, preparing individuals for a particular occupation or training them in a particular skill will not ensure a sustained and healthy working life. There is ample evidence that an increasingly large percentage of university graduates go for jobs unrelated to their study. Rather than seeing this as “waste”, employers look for rich generic capacities in their recruits that can support the multiple and varying tasks they are expected to do. These generic capacities include effective communication skills, good human relations, willingness and capability to learn, senses of responsibility, ability for self-management, preparedness for risks and unplanned challenges, and creativity and innovation. Less explicit in these expectations is the importance of integrity. Individuals are now, more than ever, exposed to ethical decisions and moral dilemmas, which they would have previously been shielded from by bureaucratic protocols in huge industrial set-ups.

### **The move towards learning**

The Education Commission’s first response was to set education targets for individuals to become “happy to learn, effective in communications, ready to commit, bold at innovations”. The adoption of individual development as the starting point for reform represented a paradigm shift in education policies. There has always been a dichotomy between national development and economic needs on the one hand, and individual needs and personal growth on the other. In a collective culture, policy thinking is often tilted towards national and economic needs. However, the paradigm shift is less a matter of submitting to the ideology of individualism, than a pragmatic consideration of how education can realistically contribute to societal advancement, including economic growth.

The decision makers became convinced that education is about learning, and that learning is a matter of experience, not transmission of knowledge. In 2001, a crucial reform document was published – Learning to Learn (Curriculum Development Institute, 2001). The title carries two major messages: the change of focus from “teaching” to “learning”, and a new emphasis on the process of learning rather than memorising facts. This document, still the basic reference for the entire reform effort, was informed by the contemporary theories of learning. In layman’s language, these theories hold that:<sup>20</sup>

- Learning is the active construction of knowledge by the learner.
- Learning is a process, achieved through activities called learning experiences.
- Similar experiences may lead to the construction of different kinds of knowledge, i.e. people learn differently.
- Learning is for understanding.
- Understanding is demonstrated by the effective application of the knowledge thus constructed.
- Effective learning experiences often require integration of knowledge.
- Learning is therefore best in real-life experiences with actual effects.
- Learning is also a social action, best achieved in groups.

The reform exercise in Hong Kong-China incorporates the main theories about learning, rather than committing itself to any particular school of “constructivism”. However, it is very much underpinned by the notion of constructive learning.

In 2001, as a major step in the reform, public assessments after primary schooling were abolished with immediate effect. This caused some confusion among school principals and teachers, who had to seek new frames of reference. However, the move has proved critical to primary schools, allowing teachers to develop more relevant school-based learning activities and changing the general discourse in primary schools from one of examinations and drills to one of learning. As a result, in less than a decade, secondary schools are seeing more active learners coming out of primary schools. Student reading literacy has improved according to international assessments. For example, in PIRLS (Progress in International Reading Literacy Study), Hong Kong-China’s primary schoolchildren’s reading literacy performance was elevated from 14th in 2001 to 2nd in 2006 in the international rankings (Mullis

**Table 4.2 Hong Kong-China’s mean scores on reading, mathematics and science scales in PISA**

	PISA 2000	PISA 2003	PISA 2006	PISA 2009
	Mean score	Mean score	Mean score	Mean score
<b>Reading</b>	525	510	536	533
<b>Mathematics</b>		550	547	555
<b>Science</b>			542	549

Source: OECD (2012).



et al., 2006). At the secondary school level, PISA measures for 15-year-olds show fairly consistent and high results across the three skills tested, including reading (Table 4.2; OECD, 2010).

### **The impact of the reform on secondary schools and higher education**

Although the curriculum changes occurred at all levels, the consequences have been most noticeable at senior secondary level:

- The secondary school curriculum is now designed according to what learning experiences students need, rather than being guided by manpower needs in the economy.
- The curriculum is decided in secondary schools before seeking endorsement from universities. The latter's concern is to select the best students, while the curriculum reform aims for lifelong benefits for all students.
- The curriculum is framed around eight "key learning areas", rather than subjects: Chinese language, English language, mathematics, science and technology, social science and humanities, sports and arts, applied learning (to allow students to gain real-life workplace experience) and other learning experiences, including service learning, workplace visits and overseas experience. The latter two are new to both teachers and schools.

Following a long process of negotiation with higher education institutions, a compromise was reached in which secondary school students going on to university are expected to perform in four areas: Chinese, English, mathematics, and a new subject called liberal studies (Box 4.5). Institutions and programmes may also ask for one other "subject". This reflects a change among higher education institutions: previously they had based their student selections on the number of subjects studied, as if that would guarantee better academic performance; now they understand the benefit of requiring fewer subjects, but broader learning experiences.

In higher education, the focus now is how to make the best use of the additional year in the new system (Figure 4.2b). Almost

#### **Box 4.5 Liberal studies for critical thinking and innovation**

The new subject of liberal studies has introduced a new area of assessment in secondary education in Hong Kong-China. It involves a learning experience with timetabled slots but no syllabus – only broad topics. Assessment is meant to be flexible. In effect, teachers allow students to design their own learning schemes in which they rely mostly on current affairs and non-textbook information, and develop high-order or critical thinking. This includes asking sensible questions; finding directions for analysis, synthesis and conceptualisation; and proposing hypotheses or theories. Higher education institutions have agreed to take liberal studies as a necessary subject for admissions. That has given some weight to the programme. The freedom of design had caused some confusion among teachers, but is now gradually understood as an opportunity to exercise their professional discretion, and to indeed open students' minds for independent and critical thinking. Nonetheless, since it is a new approach to learning, its design has taken a lot of energy among teachers.

all institutions have decided not to extend specialised studies to the additional year but to offer alternative learning experiences, following the spirit of the reform in secondary curricula. Such alternative learning experiences include a new common core curriculum, all kinds of experiential learning and expansion of overseas exchanges.

It is conceivable that after 2012, the higher education scene will be very different. After years of discussion and design, the New Senior Secondary (NSS) curriculum was launched towards the end of 2009 in anticipation of a new public examination in 2012, when university entrance requirements will change accordingly. As this chapter is being written, both secondary and higher education institutions are busy preparing for the change.

Critical to the reform is construction of a new assessment system to facilitate the changes in curriculum and pedagogy. This is underway, and faces the dual task of reflecting the new philosophy of learning and gaining international recognition for university admissions.

### **Key factors in managing the reform**

The Hong Kong-China education reform has benefited from a long lead time, well-designed preparations and good perception management:

- From 2005, four years before implementation of the new curriculum, the government organised meticulous activities to prepare schools. These included whole-day information "retreats" covering all the schools, and middle managers, such as subject



department heads. These eased schools into the changes, allowed them to develop ownership of the reforms, and minimised unnecessary resistance during the long reform process. This was essential given that the increased workload and disturbance for schools were by no means trivial. The bulk of preparation for the reform stayed with the schools. The reform could be seen as a combination of centralised design, school-based implementation and professional support.

- The media has been involved in the entire process, with seminars held for reporters on the fundamental principles of the reform philosophy and constant interactions with chief editors.
- The public's focus has been kept on societal change and the need for student learning through documents, sustained discussions, seminars and conferences.

However, there is no uniform model of reform implementation for schools. Indeed, its very core was respect for individual needs, and hence the evolution of schools into more autonomous entities. Under the general theme, and with the pulling force of the public and university entrance exams, schools have developed rather diverse approaches to implementing the reform. Nonetheless, because of the change led by the reform, schools across the board have developed their own mechanisms of collective decision making and division of labour which respect their individual school cultures.

### Achievements and challenges

The Hong Kong-China education system has been reformed several times, but people tended to shun the word “reform” until the most recent overhaul. Overall, the Hong Kong-China government is known for its philosophy of “positive non-intervention”, although that has often been challenged in recent years. In the two decades after the war, the Hong Kong-China government did not intervene in the school system beyond providing subsidies. Even in later years, when government action in developing and reforming education became significant, the general understanding remained that government intervention should be minimal. This philosophy could be called the “governmentality” of Hong Kong-China, to use Foucault's term.<sup>21</sup> This is fundamentally different from other jurisdictions where governments see themselves as the comprehensive controllers of all things happening in schools.

The net result of this philosophy of non-intervention is to provide schools ample room for professional judgement and professional decisions on how to educate students in their respective schools. It could be seen as an empowerment of the teaching profession, but in the professional rather than political sense. However, it is also a challenge because it means great disparity among Hong Kong-China's schools. Another consequence is that unlike practices in Shanghai and Singapore, where weaker schools are identified and measures taken to strengthen them, Hong Kong-China is reluctant even to rank schools. The result has been that some public schools receive standard public funding yet deliver sub-standard educational services. Parents see this as unfair. Changing the situation may not be straightforward, however, because it will mean allowing the government to actively intervene.

Nevertheless, Hong Kong-China's comprehensive reform is succeeding because of its strong rationale: fundamental change in society requires new ways of looking at human learning. The reform challenges the very basics of student learning and how such learning can best be achieved.

### LESSONS FROM SHANGHAI AND HONG KONG-CHINA

Shanghai and Hong Kong-China represent two different approaches to education, which makes it worth looking at them separately. Yet despite the differences, the students of both cities consistently perform well in international comparisons, as the PISA results testify. It is interesting to compare some of the common features of the two cities: they share a cultural heritage that treasures education, yet their students suffer from tremendous examination pressure. They share a colonial past, although colonial rule in Hong Kong-China lasted much longer. Both are major metropolitan centres in China, and indeed in Asia, and both prosper because of the vibrant cultures produced by highly-educated citizens.

While both cities launched major reforms more or less at the same time, they have followed very different development paths over the past six decades. Shanghai became a major industrial centre under the government of the People's Republic, and later, at the opening of China, saw remarkable development in the service sector. Before 1997, Hong Kong-China remained outside China, and hence was relatively immune from its political fluctuations. It still hosts the country's freest market and has become the centre of finance and management for the whole of Asia.

Shanghai belongs to an organised society and approached education reform in an organised way. It would be inaccurate to describe the Shanghai reform as top-down, because unmistakable and remarkable initiatives emerged from the grassroots. However, the municipal government not only designed the reform but also intervened in the process, such as by running schools and improving teaching.

Hong Kong-China has adopted almost the opposite approach. It provides schools with a platform, supports them with resources and modifies the public examination as well as university admissions, but leaves the process of reform to the schools. Teachers may



have found this challenging because changes in the curriculum and examinations have upset their familiar habits. But the reform has pushed schools and teachers to take a professional stand, exercise autonomy and adapt the changes to best fit their respective student bodies.

### Building legitimacy

Both Shanghai and Hong Kong-China aim high in their educational ambitions. They both use moralistic statements and slogans to guide their reforms. In the 1990s, Shanghai used the slogan of “first class city, first class education”. Although vague, the concept has driven the development of education and kept education high on the policy agenda.

Hong Kong-China has always felt insecure in international competitions, and much of its competitive edge is being challenged by mainland China and by other jurisdictions in the vicinity, such as Singapore, Malaysia, and even Macao. Hong Kong-China has identified “six pillars” for its further development, and building an “education hub” is one of them.<sup>22</sup>

The sustained emphasis on education carried in these statements attracts the attention and support of the entire society. It underpins the allocation of substantial government resources to education and helps mobilise community resources. And as good education cannot be achieved only by teachers, the statement is an appeal to support from all parts of society. In other words, a consistent continuous movement creates and reinforces the legitimacy of educational development (Box 4.6).

#### Box 4.6 Building support for the latest reforms

China's *Outline of the Medium and Long Term Plan for Development and Reform of Education* (Ministry of Education of the PRC, 2010b) is a blueprint for education in 2020 and perhaps beyond. The initial “consultation” draft, published in February 2010, took more than 18 months to produce. The process involved thousands of professionals and experts and more than 23 000 seminars and forums for brainstorming, and was accompanied by technical reports totalling more than five million words. It received 2.1 million submissions from all walks of society.

After the consultation draft launch in February, further discussion and revisions included provisional plans for interpretation and implementation. The exercise was chaired by Prime Minister Wen Jiabao and went through the State Council and then received endorsement from the Central Committee of the Chinese Communist Party and eventually the Politbureau, just to make sure of its high priority in the political arena. Such a strong effort in legitimacy-building is unusual, but will guarantee that the educational reform movement will carry huge momentum.

However, legitimacy means very different things in other societies and systems. There are diverse ways that governments can build and enhance the legitimacy of their policies. While the approaches in Shanghai and Hong Kong-China may not apply to other societies, the attention they give to building legitimacy for education is of crucial importance.

### Breaking away from tradition

It is difficult to say which of the factors behind these cities' successes are due to cultural heritage and which are due to policy interventions and practices. They are intertwined. However, in both Shanghai and Hong Kong-China, cultural traditions involving education, such as the emphasis on exams, were perceived as impediments to modernisation, to the move from elite to mass education, from emphasis on teaching to emphasis on learning, from fact memorisation to development of learning capacities, and from economic to individual needs. In both cities, the change in the nature and orientation of the entire education system has involved a struggle against culture and tradition.

This has also been the experience in Singapore (Chapter 5), which started its comprehensive education reforms in the late 1990s, and was also the intention of the reforms in Japan and South Korea<sup>23</sup> in the mid-1980s. The degrees of success in these reforms vary, but intolerance of the ill effects of cultural heritage was a common factor.

### Root and branch reform versus superficial improvement

These cases demonstrate that reform is much more than simply improvement. “Improvement” means doing what the system has been doing all along, but better. “Reform” involves paradigm shifts. In other words, it entails an awareness that further development of education is not only a matter of remedying perceived shortcomings; it means tackling more fundamental issues to allow education to catch up with changes in society. Without such an understanding, any “improvement” of the system and practices



only reinforces what might have gone wrong. This is perhaps the problem with education policies in many other systems. Often, there is more worry about students' under-performance in such areas as language and mathematics than concern that the entire curriculum and pedagogy might be obsolete. Any improvement without reform would mean the repetition and reinforcement of obsolete approaches to education.

### **A focus on learning**

A key factor behind the good performance of the two cities' systems is that they took *learning* as the core concern in their educational reforms. It might sound odd that educators and policy makers must sometimes be reminded that learning should be the core business of education. However, reforms in some other systems emphasise systemic planning or finance, school management or accountability, without actually looking at the causes, environments and processes of student learning. It is easy to forget that structure, policy, standards, finance and so on make no difference at all unless they affect what and how students ultimately learn. In this sense, both systems are to be congratulated for moving away from the tradition in which education based on examination preparation is reaffirmed without actually understanding the process of learning.

In a typical industrial society, the prime function of education was to prepare manpower and provide the relevant credentials. Once in the workplace, individuals were protected by orders, procedures, rules and regulations, regardless of their personal knowledge and characteristics. This function is now diminishing as the pyramidal structure is being replaced by small work units where individuals have to directly face clients, solve problems, design products or solutions, endure risks and face moral and ethical dilemmas. It is notable that in both Shanghai and Hong Kong-China, the attention to learning is not so much a matter of puritan educational ideals but rather an awakening to the future needs of society. Attention to social change and attention to learning are two sides of the same coin.

Equally, both systems have made tremendous efforts to understand human learning. These include: a community of scholars concentrating on the "sciences of learning"; a framework based on learning that shapes the curriculum; professional discussions among educators in the form of debates, seminars, forums, conferences and experiments, where theories of learning are interpreted and translated into grassroots practices; effective methods of dissemination, such as slogans in Shanghai, among grassroots teachers; and perception management to convince parents and the media of the value of the changes. All these efforts have to be strategically co-ordinated and synchronised, which requires champions who are committed to the concepts.

One issue that merits special attention is the usual confusion of student *learning with teaching or instruction*. It is true that good teaching is a necessary condition of good learning. However, there is ample evidence that a lot of learning occurs outside teaching, with no teaching, or with minimal teaching. The appeal in Singapore (Chapter 5) to "Teach less, learn more" has much resonance in Shanghai and Hong Kong-China, where the net effect of education reform is often evidenced by active and independent learning by students. Shanghai's powerful slogan: "return the time to students" has changed the classroom scene. In Hong Kong-China, the best schools are characterised by strong student self-governance, rather than the highest scores.

### **A holistic approach**

Education reforms in the two cities do not concentrate only on certain aspects of education; they involve developing the student as a whole. Students' academic achievements are not separate from the other aspects of their personal development. Extra-curricular experiences, for example, are treated in both systems as essential elements in students' comprehensive learning experiences and their holistic development.

The reforms also try to mobilise all sectors of society and are seen as an undertaking that concerns everyone. Both societies positioned education as a core element in the city's future. Hence, the reforms not only received priority consideration on the governments' agenda, but all sectors of society were expected to participate and give support.

### **Accountability**

The term accountability, sometimes known as quality assurance, is pervasive in the literature on education policies. However, often people may assume that the existence of quality assurance procedures is an assurance of quality. This may not be true at all. First, as noted above, defining quality and the standards we expect should precede methods for assuring this quality. In other words, if we set low quality standards, any quality-assurance mechanism will only assure low quality. Second, quality assurance only works in a culture that has internalised high quality as a norm. This is the only way that there will be active efforts towards and understanding of quality across the board.

Shanghai and Hong Kong-China both have social norms that value quality in education. First, both have systems of quality assurance in the managerial sense. There is no shortage of performance indicators and appraisal mechanisms. Second, both education systems are basically transparent. While parents in these societies are not used to intervening in school activities as they do in many Western societies, they do have a very powerful influence over schools, either through their choice of schools



or through the media, which run constant reports comparing schools. The vibrant cyber-community has added to the tremendous pressures on schools to maintain a high quality of education. In Shanghai, schools and parents have very close relations, and information flows both ways on cell phones.

Principals and teachers therefore face a daily struggle to balance administrative accountability, client accountability and professional accountability. Dealing with the larger environment is not seen as an extra chore but as an integral part of professional responsibilities. This sense of accountability is built into programmes of teacher preparation, teachers' continuing professional development and training for school leadership. Hence, unlike in other cultures, accountability in Shanghai and Hong Kong-China is not regarded as a separate machinery to assure quality. Instead, accountability is built into the system as social expectations, as fundamental in school leadership, as well as an essential part of teachers' professionalism. It is not about procedures and indicators.

### **FINAL OBSERVATIONS: EDUCATION FOR ECONOMIC SUCCESS**

China entered the global economy very late in the game, but has been making breakneck progress ever since. Both Hong Kong-China and Shanghai aim high and aspire to perform well in many areas of social development. Their ambitions are augmented by their prospering economic and financial sectors. Both societies also regard human resources as the only resources they can rely on, and hence they have made substantial investments in education. This is a virtuous circle. Their spectacular reforms in education have made possible a no less spectacular economic success, which has in turn made it possible to ratchet up the quality of their education systems. Their cultural heritage has played an important role in these successes, but that heritage has been constantly modernised.

In all these ways, the experience in the two cities reflects the kind of reform in education that appears to be necessary and essential worldwide as the economy advances.





■ Figure 4.3 ■

## Shanghai-China and Hong Kong-China: Profile data

Language(s)	Official: Standard Mandarin (Shanghai) Standard Cantonese; English (Hong Kong-China)
Population	1 341 million (2008) <sup>24</sup> 12 million (2007) <sup>25</sup> ( <i>Shanghai</i> ) 7 million (2008) <sup>26</sup> ( <i>Hong Kong-China</i> )
Youth population	19.5% <sup>27</sup> (OECD 18.5%)
Elderly population	8.2% <sup>28</sup> (OECD 14.7%)
Growth rate	0.48% <sup>29</sup> (OECD 0.56%; World 1.15%)
Foreign-born population	0.1% Immigrants (2010) <sup>30</sup>
GDP per capita	USD 7 519 (2008) <sup>31</sup> USD 11 361 (2009) <sup>32</sup> ( <i>Shanghai</i> ) USD 34 457 (2008) <sup>33</sup> ( <i>Hong Kong-China</i> )
Economy-Origin of GDP	Manufacturing, mining, utilities and construction 48.6%; Services 40.1%; Agriculture, forestry, fishing 11.3% (2008) <sup>34</sup> Manufacturing, auto making, chemical processing, steel manufacturing, biomedicine ( <i>Shanghai</i> ) <sup>35</sup> Manufacturing, finance, trade, other services, other sectors ( <i>Hong Kong-China</i> ) <sup>36</sup>
Unemployment	5.7% <sup>37</sup> (OECD average 8.6%) <sup>38</sup>
Expenditure on education	3.3% of GDP <sup>39</sup> (OECD average 5.8%) <sup>40</sup> 3.6% of GDP ( <i>Hong Kong-China</i> ) <sup>41</sup> 16.3% of total government expenditure <sup>42</sup> (OECD average 13.0%) <sup>43</sup> 20.2% of total government expenditure ( <i>Hong Kong-China</i> ) <sup>44</sup>
Enrolment ratio, early childhood education	54% (2008) (regional average 57%) <sup>45</sup>
Enrolment ratio, primary education	111% (2008) (regional average 110%) <sup>46</sup>
Enrolment ratio, secondary education	81% (2008) (regional average 80%) <sup>47</sup>
Enrolment ratio, tertiary <sup>48</sup> education	26% <sup>49</sup> (regional average 29%)
Students in primary education, by type of institution or mode of enrolment <sup>50</sup>	Public: 95.1% (OECD average 89.7%) Government-dependent private: 4.9% (OECD average 7.4%) Independent, private (included in "Government-dependent private" figure) (OECD average 2.9%)
Students in lower secondary education, by type of institution or mode of enrolment <sup>51</sup>	Public 92.1% (OECD average 86.1%) Government-dependent private: 7.9% (OECD average 10.5%) Independent, private (included in "Government-dependent private" figure) (OECD average 2.9%)
Students in upper secondary education, by type of institution or mode of enrolment <sup>52</sup>	Public: 89.1% (OECD average 81.4%) Government-dependent private: 10.9% (OECD average 13.3%) Independent, private (included in "public" figure) (OECD average 5.3%)
Students in tertiary education, by type of institution or mode of enrolment <sup>53</sup>	Tertiary type B education: missing data <sup>54</sup> (OECD average public: 59.3% Government-dependent private: 22.8% Independent-private: 17.9%) Tertiary type A education: missing data <sup>55</sup> (OECD average Public: 68.2% Government-dependent private: 16.2% Independent-private: 15.5%)
Teachers' salaries	Average annual starting salary in lower secondary education: no data (OECD average USD 29 801) <sup>56</sup> Ratio of salary in lower secondary education after 15 years of experience (minimum training) to GDP per capita: no data (OECD average: 1.26) <sup>57</sup>
Upper secondary graduation rates	Data missing (OECD average 84%) <sup>58</sup>



## Notes

1. In this chapter we use the term “Confucius society” as a convenient shorthand for an array of jurisdictions: Japan, South Korea, North Korea, Vietnam and the Chinese communities (Mainland China, Taiwan, Hong Kong-China, Macao). While Singapore shares the same cultural heritage, it is also influenced by the Malay and Indian cultures. See more detailed discussions in Cheng (2011).
2. Researchers have found that the oldest candidate was 104.
3. In most dynasties, women were excluded from the exercise.
4. Gross enrolment ratio is used here because of age staggering at that level.
5. See more detailed discussion in Yang 2004.
6. This was due to the Nanking Sino-British Treaty of 1842, after China’s defeat in the Opium War.
7. This is comparable with South Korea and Japan, where the number of places in higher education exceeds the number of high school graduates.
8. Institutes in Shanghai belong to different categories in terms of their relations with the central and municipal governments, with different degrees of sponsorship from the two authorities. Accordingly, they are assigned admission quotas of different mixes between local and national candidates.
9. The best presentation of this cultural assumption is by Fei Hsiao-tung, a student of Malinovsky and the first renowned anthropologist in China. According to Fei, society is perceived by the Chinese in a “hierarchical configuration” that is vertical and structured, as opposed to the Western view of society as an “association configuration” that is flat and ad hoc. This was best presented in the lecture series *Earthbound China* (1947).
10. The curriculum reform reduced a class period to 35 minutes for primary school and 40 minutes for secondary school in Shanghai. In most of the other provinces in China, a class period is 40 minutes for primary school and 45 minutes for secondary school (Ding, 2010).
11. The following three sections are extracted and modified from a commissioned paper by Ding (2010).
12. See <http://wljy.sherc.net/kgpt/>
13. This is a policy started in 2002, widely quoted. One of the most recent discussions can be found in Shao, 2010.
14. These are extracted and modified from Ding (2010).
15. Data from a group interview with good public school leaders.
16. This is from an interview with Mr Gu Lingyuan, a nationally famous mathematics teacher turned researcher, who is influential in education reforms in Shanghai.
17. For example, it is 7th according to the International Monetary Fund (Economy Watch (2010). Data: Economic Statistics Database).
18. The Society of Accountants’ representative made the point that what had been taught in universities was not useful in the workplace, and hence graduates have to unlearn what they have learned. They’d rather they were not taught accounting, which they could learn on-the-job in a matter of months. The interview was carried out in 2000.
19. Including a special session with Dr Albert Tuijmann, then member of the OECD education team, in June 2000.
20. For the best summaries of these theories see Sawyer (2006) and Bransford et al (2000).
21. This is a concept development by Foucault in his later years. A brief introduction to the concept can be found in [www.policyaddress.gov.hk/08-09/eng/policy.html](http://www.policyaddress.gov.hk/08-09/eng/policy.html)
22. This is one of the main themes of the Chief Executive’s Policy Speech in 2009 (Tsang, 2009).
23. South Korea launched a few reforms in the 1980s which went against the elitist tradition of calling for equalisation of secondary schools and mass admission to higher education. See Cheng 2010.
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26. World Bank, World Development Indicators.
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28. OECD (2012), *OECD Factbook 2011-2012*, OECD Publishing. Ratio of population aged 65 and older to the total population. (data from 2010).
29. OECD (2012), *OECD Factbook 2011-2012*, OECD Publishing. Annual population growth rate. (data from 2009).



30. China is a sending country, with an estimated diaspora of 35 million worldwide (International Organisation for Migration, [www.iom.int](http://www.iom.int)).
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46. UNESCO-UIS (UNESCO Institute for Statistics) (2011), *UIS Statistics in Brief: China*. Percentage represents gross enrolment rate for MF; Year of reference 2010.
47. UNESCO-UIS (UNESCO Institute for Statistics) (2011), *UIS Statistics in Brief: China*. Percentage represents gross enrolment rate for MF; Year of reference 2010.
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## **Annex 4.A1. Interview Partners (Shanghai)**

### ***Shanghai Academy of Educational Science***

Lu Jing, Associate professor, Vice director, Shanghai Institute for Basic Education Research and Shanghai PISA Centre, Shanghai Academy of Educational Sciences.

Gu Ling-yuan, professor, master teacher, former vice director of Shanghai Academy of Educational Sciences. He was honoured Shanghai Education Hero in 2003.

Dr. Wang Jie, Associate Professor, Director of Teacher Education Centre, Shanghai Academy of Educational Sciences.

### ***Interviews at China Pu Dong Cadre College***

*Shen Zu-yun*, Director of Shanghai Educational News Centre.

*Wang Mao-gong*, Director of Education Bureau in Xuhui District, a central district in Shanghai.

*Yin Hou-qin*, Vice director general, Shanghai Municipal Education Commission.

*Zhang Min-sheng*, professor, Shanghai Education Society, former Vice Director General of Shanghai Municipal Education Commission.

Dr. *Zhang Min-xuan*, Professor, Vice Director General, Shanghai Municipal Education Commission, PGB and NPM of Shanghai PISA 2009.

*Zhu Jian-wei*, Director of Education Bureau in Minhang District, a suburb district in Shanghai.

### ***Shanghai Teaching Research Institute***

*Tan Yi-bin*, Assistant Director, master teacher, teaching researcher in Chinese, Shanghai Teaching Research Institute, Leading Expert of PISA 2009 Reading Expert Group in Shanghai.

*Xu Dian-fang*, Director, Shanghai Teaching Research Institute.

### ***Teachers and Principals***

*Bai Bin*, principal, Chinese teacher, Wen Lai Middle School, PISA School Co-ordinator in PISA 2009 Field Trial, which is held on April 25, 2008.

*Ding Yi*, Vice Principal, Middle School affiliated to Jing 'an Teacher Education College.

*Li Xiao-yu*, vice principal charges on teaching, Chinese teacher, Qibao High School.

*Qiu Zhong-hai*, Master teacher and master principal, Shanghai Qibao High School, he was honoured Shanghai Education Hero in 2008.

*Shi Ju*, mathematics teacher, Wen Lai Middle School.

*Wang Hong*, Chinese teacher, Wen Lai Middle School.

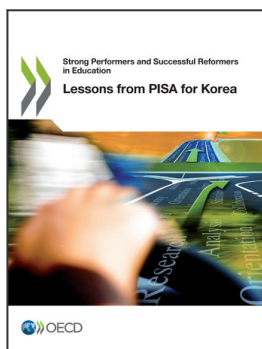
*Xu Feng*, vice principal, politics teacher, Wen Lai Middle School.

*Mr Zhou*. Vice Principal, Wen Lai High School.

*Zhou Ming-jun*, English teacher, Wen Lai Middle School.

## **Annex 4.A2. Interview Partners (Hong Kong-China)**

The material for the section on Hong Kong-China is based on the experience of Professor Kai-ming Cheng, Chair of Education, University of Hong Kong (1995 to present), Senior Advisor to the Vice-Chancellor, University of Hong Kong (2003 to present), and former Vice-Chancellor, University of Hong Kong (1997-2003).



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