

**FACING THE KNOWLEDGE SOCIETY:
REFORMING SECONDARY EDUCATION
IN HONG KONG AND SHANGHAI**

by
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Facing the Knowledge Society: Reforming Secondary Education in Hong Kong and Shanghai

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Preamble

Hong Kong and Shanghai are the two major metropolitan urban centers in China. Both cities are known for their vibrant pace of life, the entrepreneurship of their people and the rapid pace of development. Yet, under the scheme of “one country two systems,” people in the two cities live under markedly different political and economic systems. Having taken rather separate paths of development, both cities have become economic hubs hosting incredible number of international enterprises. Nonetheless, both cities face major challenges in their development, and people, sometimes narrowly seen as human resources, are recognized as the most essential asset for the cities to sustain their development.

In this context, both cities have launched major education reforms in the past decades. This paper focuses on reforms in secondary education, the most fundamental part of these education reforms. Hong Kong and Shanghai share some commonalities, and are also different in many aspects, yet the issues facing their reforms reflect the major issues facing education systems in rapidly emerging post-industrial societies.

This paper attempts to describe and analyze the development and reforms of secondary education in both cities over the past 25 years. Comparing the two cities helps us construct a spectrum of possibilities on the one hand, and identify some common themes in the development of secondary education on the other. The commonalities and differences, the experiences and lessons, should shed light on similar reforms in other parts of the world.

I. BACKGROUND

Hong Kong and Shanghai share many similarities, yet they have taken different paths in their development. This section of the paper provides the background in which the two cities launched their respective education reforms.

History

By international norms, both Hong Kong and Shanghai are relatively young cities. Shanghai emerged as a major urban center only at the beginning of the 19th century, and became metropolitan only after the Middle Kingdom was forced open by the so-called “unequal treaties” signed under military threats of the Western powers. Starting from the middle of the 19th century, Shanghai was partitioned by various Western powers into “concessions,” which were virtual colonies on lease to these powers within a sovereign nation. Subsequently, Shanghai became the most entrepreneurial and international hub in China. The concessions were returned to the Chinese sovereignty only at the end of the Second World War.

Hong Kong was established as a colony after it was ceded to the British Empire in 1842 due to one of the unequal treaties, and another part of Hong Kong was leased to Britain in 1898. It was a British colony until China recovered its sovereignty in 1997.

Hence, while both cities are fundamentally Chinese communities inheriting strong Chinese cultural traditions, they also share a colonial past. This explains their relative ease in accepting Western culture, and hence their candidature for the most international cities in China in the context of globalization.

The two cities undertook rather different paths of development after 1949 with the change of government on the Mainland. Before 1949, Hong Kong was basically an entry point for the convenience of foreign trade with China. It was never as developed as Shanghai, which by then had become one of the major urban centers of Asia. Meanwhile, Hong Kong, as a small island, was almost totally dependent on developments on the Mainland.

Both cities underwent major transformations from 1949 to 1976, when the Cultural Revolution ended. During this period, Shanghai experienced a planned economy in a very strong sense of the term. It was shaped as the nation’s center for light industry, which at the time was regarded as the forerunner of economic development. However, Shanghai also almost lost its

economic identity. Its development was totally geared toward the successes and failures of the socialist national economy, and the city's image for energy and entrepreneurship became rather tarnished.

During the same period of time, Hong Kong gradually paved the groundwork for its development into an international hub. It enjoyed the closed-door policies of the countries in the vicinity, and became the most welcomed place for international trade due to its freedom and openness. Over the years, Hong Kong shifted from being a harbor for transport to being a manufacturing center. At one time, Hong Kong was one of Asia's largest manufacturers of clothing and electronic products.

The end of the Cultural Revolution on the Mainland in 1976 turned a new page for both cities. Shanghai was the quickest to recover from the ruins of the Cultural Revolution and soon became the champion in China's move towards a "socialist market economy." Shanghai was further given the liberty to move away from national policies and started to lead the country in advancing a market economy. By the turn of the century, Shanghai had become the strongest local economy in Mainland China and, among other distinctions, now hosts the largest number of head offices of multinationals in China.

During the same period, Hong Kong continued to develop, yet faced a quickly changing environment. The open doors to the Mainland saved Hong Kong's manufacturing industries, many of which moved across the border to the Mainland to exploit the cheap labor there, but otherwise faced serious competition due to rising local costs. Hong Kong has become a major partner with the Mainland, which has emerged as the world's largest manufacturer. In 2005, with a population of 7 million, around 60 million workers were employed in factories run by Hong Kong industrialists on the Mainland. The attraction of cheap labor across the border, however, has also contributed to delaying Hong Kong's own development in technology and knowledge-based economies.

If we use GDP as simple indicator, in 2004, Hong Kong's GDP per capita was around US\$23,880, ranked around 24th in the world. That of Shanghai was around US\$4,500 in 2004, already more than five times the national average (of around US\$840).

In 1997, China resumed its sovereignty over Hong Kong. Since then, Hong Kong has been given even more preferential opportunities for closer partnerships with the Mainland. Hong Kong reciprocates with its knowledge for international interactions, mainly legal and

management expertise that China lacks. Meanwhile, Hong Kong's economy has undergone a major transformation towards a knowledge-based economy dominated by the service sector. The financial sector, for example, has grown into one of the largest sectors of its economy. Other newly developed sectors related to management, consultancy, and creativity have also experienced rapid growth and change. At the same time, Shanghai has also taken bold steps to dramatically develop its service economy.

Both Hong Kong and Shanghai are facing challenges from what is conveniently called a "knowledge society." As such, the education systems in both cities also face major challenges. These challenges are being met with different ideologies and approaches, underpinning the commonalities as well as the differences between the education reforms in the two cities.

Governance Ideologies

There is marked difference in the ways in which the two cities treat development. Shanghai has been under central planning for almost five decades, and is conceptually still under the influence of such a framework, although one which is very much diluted since the economic reform started in the early 1980s. It has a strong tradition of initiatives coming from the government. This should not be conveniently reduced to the notion of "top-down" control. In a way, the government has fairly extensive and intensive consultation networks and feedback mechanisms, and makes sure that most of the policies it promulgates have the widest support from those affected by them. This is certainly the case with education. The net result is that the government-initiated policies are often effectively implemented.

Meanwhile, this tradition has given the government strong legitimacy to make decisions. The civic culture is one in which people expect the government to take the lead. Accordingly, the government is skilled at thinking ahead, borrowing the tradition of the socialist "five-year plans," combining it with modern strategic thinking, and arriving at long-term development goals and strategies for the municipality. The recent change is that the government deliberately introduces increasing market elements into its development strategies and tries to reduce the influence of the "visible hand" (the government) over time.

Hong Kong, on the other hand, has always been antithetical to the notion of planning and has been seen as the city with the freest market. Its development in the past, while under colonial government, has been a convincing testament to the fact that *laissez faire* works, and the city has

found its own way of running with a “small government.” Until a decade ago, total public expenditure was kept at 15 percent of GDP. The government followed an ideology of “positive non-intervention,” trying its best to manage the city with minimal intervention.

However, with the changeover of the sovereignty in 1997, the government was keen to do something to lead and change the Special Administrative Region. With almost no intervention from the central government in Beijing, the Hong Kong government has tried to influence the market. This has been the case in real estate, in the development of innovative technologies, and in other areas of social development such as unemployment. This approach has also affected the policy orientation in education. Hong Kong does not have a strong tradition of strategic planning, and the government does not enjoy the legitimacy of support for intervention. However, there are indeed areas of development which cannot be achieved purely by the flow of the market. The latter could well be successful in areas such as technology, where Hong Kong has developed along its own path with relatively little government intervention. Hong Kong is still on a path of searching for a new ideology that is appropriate for the new era.

Economic Structures

The two cities operate with very different economic structures and have different orientations in perceiving such a structure. For historical reasons, Shanghai still maintains a sizable sector of the manufacturing economy. Having such a significant manufacturing sector used to be seen as a source of pride for Shanghai, as it accounts for Shanghai’s GDP, which has always been the highest in the whole nation. In the mid-1990s having such a large manufacturing sector was seen as a burden for the city’s development towards a service-center and hence towards a knowledge economy. In more recent years, however, such a sector has been strategically maintained, as is also done in Singapore.

Learning from the Hong Kong lesson, Shanghai now sees its considerable manufacturing sector as a safety cushion and a stabilizer of its economic and social development. It has developed a strategy of constructing the city in zones of diminishing percentages of manufacturing industries comprising four zones from the urban centre to the periphery. First, are the “core industries” (information technology, finance, commerce and trade, automobile, comprehensive equipment, real estate); second, the “newly emerging industries” (biomedicine, new material, environmental protection, logistics); third, are the traditional “basic industries”

(petrochemical, steel, shipbuilding, light industry, textile, food); and fourth, are the “urban industries” (urban agriculture, urban manufacturing, urban tourism). Meanwhile, Shanghai enjoys its position in a large nation absorbing a large quantity of non-skilled laborers as well as top talent coming from all parts of the country.

In the meantime, Hong Kong has lost its manufacturing industries almost entirely to the Mainland. On the one hand, this was one of the main causes for Hong Kong’s economic boom in the 1980s, when China began to open its markets. Hong Kong’s industrialists have fully exploited the difference in labor costs across the border and developed its business in the vast hinterland. Such a development, however, has also caused long-term consequences. One of these has been the delay in the development of innovative technologies. At one time, the development of high-tech was seen as a poison for investment because of its high costs. For almost a total decade during the 1980s, Hong Kong’s industries relied so much on cheap labor in the Mainland that there was no incentive for the development of technologies. Nonetheless, in both Hong Kong and Shanghai, the service industries have grown at a very high speed. We will see more of this when we come to detailed discussions of the education reforms.

The Catchment Areas

Both Hong Kong and Shanghai are cities whose economies cannot be totally self-contained and self-dependent, and which are closely related to large catchment areas. However, they are rather different in their relations with their respective catchment areas.

Shanghai has gradually constructed itself with the support of the industries in the Yangtze River Delta and indeed along the entire Yangtze basin. With a national economy that is now very much decentralized and localized, Shanghai is free to develop its relations with provinces in the vicinity. Because of its strong industrial bases, and more recently, the development of the strongest service sector in China, Shanghai has developed its leadership position in the economies of nearby provinces, although such provinces still maintain their relative independence. Shanghai therefore has developed its economic plans by including the Yangtze River basin as its hinterland. A comprehensive system of economies is taking shape in the Yangtze basin with Shanghai as the core of the hub.

Hong Kong could have played the same role in the Pearl River Delta with its economy which, to date, is much stronger than Shanghai’s in absolute terms. The economic reality is that a

large majority of the industries developed in the Pearl River Delta, which has now become China's manufacturing hub, exist due to investments from Hong Kong. However, the border between Hong Kong and the Mainland is still a barrier to further integration of the economies. This is partly due to the constitutional setup of the Basic Law for Hong Kong, which maintains a separate jurisdiction. It is also due, however, to the colonial legacy which sees the border as a protection against communism. There is flow of capital into the Mainland, but there is only a limited flow of manpower across the border, for example. The situation has changed significantly since 2003, when the Central Government in Beijing issued special policies to facilitate "closer collaboration" between Hong Kong and the Mainland and the southern provinces in particular. This advanced a new interpretation of "one country, two systems", in effect including Hong Kong in China's development plans.¹ In 2006, during China's 11th Five-Year Plan, Hong Kong was included as part of the national development plan.

¹ It is commonly conceived that there are now three economic hubs in China. Apart from Shanghai and Hong Kong, there is Beijing which has the Northern provinces by the Yellow Sea as its catchment area.

II. THE EDUCATION SYSTEM

Parallel to their roles as economic hubs, both Shanghai and Hong Kong are also education hubs in the region. Shanghai is known for producing people who assume leadership in the national arena. Hong Kong is also known for producing a large number of leading figures among multinationals. The following are some of the contextual descriptions of the two education systems.

The Cultural Tradition

At the most fundamental level, both cities are essentially Chinese communities. Although in the past half-century, they have undertaken very different paths of societal development, they nonetheless share the same cultural heritage, including similar cultural values about education. This has a number of implications with respect to secondary education.

Education is highly valued in society. There is little problem in achieving universal attendance in basic education. Hong Kong legislated for nine-year compulsory education in 1978, at a time when attendance was already widespread beyond nine years. When the Law for Compulsory Education was enacted in 1986 in China, Shanghai had universal attendance well beyond junior secondary education. Even senior secondary education was largely universally attended in both cities, if all modes of education (i.e. including vocational schools) are counted.

The aspiration for education, however, is inherited from the civil examination system of the ancient dynasties, where education is synonymous with preparation for the examination, where the objective is solely for admission into the officialdom, and where there is little sense of learning objective knowledge. Hence, as a cultural heritage, the examination system dominates the entire educational scene. This is particularly true at the secondary education level because of the terminal public examination, which is perceived as decisive for young people's future, both in terms of employment and further study. The situation is changing rapidly, however, to the disadvantage of young people who have attained only secondary education.

In both cities, and perhaps in all East Asian cities, the sole objective of secondary education is preparation for higher education. In Hong Kong, secondary graduation used to be an exit from the education system, and there were indeed entry points in salary scales for government employment at that level. Such entry points have quickly disappeared from the

horizon. In Shanghai, partly as a legacy of the planned economy, general secondary education is meant only for higher education preparation. In such a system, theoretically, general secondary graduates are not considered for employment.

As such, screening and competition have always behaved as the major underpinning ideologies in secondary education in both cities. Students and parents still regard education as a means for upward social mobility. Educators still earnestly but subconsciously regard education as an instrument for classification and ranking of human beings. Qualification, rather than real knowledge or ability, is perceived as the sole goal of education. Such an ideology is sustained even when the supply of higher education is significantly expanded. As will be further discussed later, this ideology is also seen as one of the major obstacles to reform in both cities.

Organization of the Education Systems

Shanghai operates a system which is typical of many systems in Asia. Schooling starts at age six, with six years of primary schooling and a 3 + 3 system of secondary education, referred to as junior and senior secondary school. Junior and senior secondary education are normally offered in different schools. Graduates of senior secondary education sit for the Higher Education Entrance Examination, which is a national assessment and which serves the sole purpose of higher education admissions. The examination dictates the secondary curriculum and the examination subjects are also the subjects taught in secondary schools. There is a system of vocational education parallel to the general senior secondary schools. The proportion of students in general and vocational school is 6 to 4, although the vocational component has been dramatically reduced. In Shanghai, in 2004, around 75 percent of secondary graduates continued with some form of higher education in one way or another. Of these, 45 percent were admitted to universities, and the other 30 percent to other types of further education. This is a very dramatic increase from the less than 20 percent of students who continued on to higher education in the 1980s. There are schools with an experimental 5 + 4 + 3 education system, where primary education is shortened to five years and junior secondary extended to four years, the government policy is to move back to the 6 + 3 + 3 system described above.

Hong Kong follows the British system of schooling. After six years of primary schooling, there are five years of secondary schooling. At the end of secondary schooling is a terminal public examination known as the Hong Kong Certificate of Education Examination. After this

examination, about 40 percent of the students continue their studies in a pre-university two-year program known as the Sixth Forms, following the British tradition. As will be seen below, the 6 + 3 + 2 + 2 school system is now being reformed to a 6 + 3 + 3 system so that students will be admitted to higher education one year earlier.² Very similar to Shanghai, Hong Kong public examinations dictate the learning and teaching which occurs in secondary schools. There is a history of a sophisticated system of technical education and vocational training in Hong Kong, but enrollment never reached above 5 percent of the age cohort. At the turn of the Century, due to reform suggestions, there was a mushrooming of community colleges, offering post-secondary non-degree courses. In 2005, 66 percent of the secondary school graduates continued with their studies in post-secondary education, a spectacular leap from the 30 percent in 2001 prior to the reform.

² This planned reform is to take place starting with the secondary school intake of 2007.

III. CHANGES IN THE WORKPLACE

Fundamental changes in the workplace coincided with a general change in the expectations for the work force. Both have posed challenges to education, and senior secondary education in particular. In the following chapter we will illustrate such changes in both Hong Kong and Shanghai.

The Changed Workplace

In Hong Kong, there has been a spectacular expansion of the service sector over the past 25 years. In 1980, in terms of economic output, 67 percent of Hong Kong's GDP growth was due to the service sector. In 2003, the service sector constituted 89 percent of Hong Kong's GDP. In Shanghai, the service sector accounts for 51.9 percent of its economic growth, whereas it was only 31.9 percent in 1991.

There has been a major shift of the workforce in both cities from the manufacturing industries to the service sectors. The expansion of the service sector has changed the structure of the workforce and the employment structure. In 2004, 82 percent of the workforce in Hong Kong worked in the service sector, as compared with 45 percent in 1980. In Shanghai, even given the relatively large sector of manufacturing industries, 55.6 percent of the workforce in 2005 was in the service sector.³

The implication of this shift toward the service industry has to do with the fact that the workplace organization present in the service industry is fundamentally different from that of the manufacturing sector. Using Hong Kong as an example:

- Instead of large organizations in the manufacturing sector, most of the organizations are small in size in the service sector. For example, in Hong Kong in 2005, more than 99 percent of the registered companies had fewer than 100 employees, 94 percent had fewer than 20 employees and 86 percent fewer than 10.
- There is a significant increase in the number of people who are either self-employed or who work as freelancers. In Hong Kong in 2003, there were an estimated 224,300 freelancers, as compared with 2,811,000 employees: a ratio of 1 to 12.

³ Shanghai Statistics Bureau, April 11, 2006.

- In the small organizations, there are weak divisions of labor, few departments, few levels, and vague specialization. People work with greater freedom towards the final output, and there are few pre-designated paths to follow.
- In such small organizations, the design of a product (or service) occurs on the front line, where workers interact directly with the clients. They have to face problems and are supposed to solve problems. They are expected to design and provide total solutions rather than departmentalized services to clients. Workers on the front lines are no longer simple implementers of procedures handed down from above.
- Because of the nature of such organizations, rule, regulations, and procedures are understandably loose. People work towards the final product, rather than according to protocols. Therefore, there is a greater demand for self-discipline, self-confidence, and self-management.
- Even in large organizations, in the more advanced workplaces, departments and layers of management are replaced by task forces, also known as product teams, project groups, or deal teams. There are very few structures aside from such task forces, and there is a very weak division of labor within the groups. In a way, these task forces are not very different in nature from the small enterprises.

Changed Expectations for Individuals

These changes in the workplace have qualitative as well as quantitative implications for the workforce. Workers are required to solve problems, design products and/or solutions, make decisions, integrate expertise, and innovate. Such responsibilities encompass abilities which were required for a leader in the manufacturing industry. Expectations for individual workers include skills such as:

- Team-work has become a common feature of the workplace in contemporary Hong Kong. This is the case with small enterprises as well as with task forces in large firms.
- Integration of expertise is essential to the successful functioning of a task force. It is not sufficient for a worker to have specialized knowledge; he or she must also know how to share his or her knowledge during the design of a product or development of a service solution.

- Specialization has become increasingly ad hoc in nature. In other words, although tasks are becoming increasingly specialized, people are not. They are required to move into a new area of expertise a moments notice. In other words, learning and acquiring new knowledge and skill, just in time, is commonplace in the workplace. Even if a worker stays in the same position in the same workplace new skills are developed because of the rapid expansion and renewal of knowledge.
- Companies recruit a worker for his or her overall capacity and potential, rather than his or her academic specialization. Often, the mismatch between one's education and one's career is no longer a concern.
- A worker's overall capacity and potential, instead of specialization, is reinforced in the frequent modification of tasks, jobs, and even careers among young people. The frequent change in work also implies a constant need for learning, giving lifelong learning a new meaning.
- Current workplace dynamics also involve intensive human interactions when compared with the industrial era. Individuals now work closely with their teammates, facing changing clients and work situations. A worker must be able to collaborate with workers in partner organizations and to involve themselves in different social networks.
- Intensive human interactions require flexibility in human relations, tolerance of diversity and conflict, a greater readiness to engage in heated debates, and sensitivity to human feelings.
- Intensive human interactions necessitate a new attention to ethics, values, attitudes, principles, beliefs, and assumptions. All these count towards individuals' successes in the workplace.

Accordingly, surveys on workplace expectations or employers' requirements concur on the following common list of attributes expected of young recruits:

- Ability for effective communication
- Ability to work in teams and work with people
- Ability to learn anywhere, anytime, on demand
- Ability to adapt to change and face challenges
- Ability to question the status quo and innovate
- Ability and willingness to assume personal responsibility
- Ability to carry things through
- Ability to organize thoughts into concepts
- Ability to accept criticism and correct mistakes
- Ability to self-manage

The above are observations of the workplace in Hong Kong.⁴ Anecdotal evidence suggests that such characteristics are also valued by employers in Shanghai, although a systematic study has yet to be undertaken. There are calls for the education system to produce graduates with “composite capacities” or “multi-talents.” Additionally, there are reports regarding the reduction in size of work organizations caused by the collapse of state-owned enterprises and the emergence of individual commercial institutions. Yet there is still a larger number of manufacturing factories in Shanghai, which persists as one of China’s largest industrial bases. Trend of freelancers or self-employment emerging as a result of the open-door policy is also a documented practice. For many years, the frequent job and career changes in Shanghai have been considered a common occurrence.

⁴ Cheng, K.M. (2004) *Questioning education: Learning and society in a post-industrial era. Inaugural Professorial Lecture.* Hong Kong: Faculty of Education, University of Hong Kong.

IV. CHALLENGES TO EDUCATION

In this section, we briefly summarize the challenges facing education in Shanghai and Hong Kong. Such challenges are perhaps common to all urban centers in a region that is undergoing fundamental economic and societal changes with the coming of the knowledge society.

Challenges to “Screening”

One of the fundamental societal impacts of changes in the workplace is the dramatic decrease in the demand for blue-collar manual workers. It used to be that most of the front-line workers were doing routine and manual jobs. They abided by strict procedures governed by meticulous rules and regulations. Such jobs are rapidly decreasing in number. In the case of Hong Kong, due to the disappearance of the factories, such blue-collar positions—in the old sense of the term—have almost disappeared from the horizon. In the case of Shanghai, most of the factories are either highly automated (those in the inner zones) or depend on guest workers for the front-lines (those in the outer zones). In Hong Kong, even jobs that were seen as routine, such as cleaning, courier services, and security, now require some basic literacy when they become outsourced and each worker faces varied environments. In both cities, private domestic helpers are all guest workers who are not educated locally.⁵

According to tradition, education systems in Hong Kong and Shanghai take on “screening” as their basic function. The disappearance of traditional blue-collar jobs has made such a basic function unnecessary and indeed obsolete. In both cities, for example, there are very few jobs remaining that are prepared to recruit secondary school graduates, whereas some 20 years ago, there were plenty of jobs awaiting young people exiting from the system at the age of 15 after completion of junior secondary schooling.

However, the tradition of “screening” is not only a matter of structure and employment. It carries an assumption that is deep-rooted in the heritage of a selective system, which originated in the ancient civil examination mentioned earlier. There is a basic assumption that those who fail in competitions deserve no further education.

⁵ In Hong Kong, domestic helpers are basically guest workers from the Philippines and Indonesia. In Shanghai, domestic helpers come from rural areas in nearby provinces.

In addition, there is still severe youth unemployment. In 2003, youth unemployment in Hong Kong reached a record high of 35 percent, and the unemployment rate has not proportionately improved as the economy recovers. Unemployment exists almost totally among those with no higher education and there is a structural problem of a mismatch of expectations. While the workplace operates under the assumption that every person should receive some kind of post-secondary education, the education system still expects that only a select few deserve education beyond secondary schooling.

Moreover, there is also an issue of quality: the quality of secondary education that young people receive in secondary schools matters. This is perhaps more of a concern in Hong Kong than in Shanghai. In Shanghai, the community seems to be generally satisfied with the secondary education its children receive, and is convinced that the system is improving. In Hong Kong, however, there is a sense of sustained dissatisfaction with the school system. While the vast majority of young people has undertaken senior secondary education in one form or another, there are indeed 19 percent (2002 figure) of youth who are “double-unengaged”—those among 15-19-year-olds who are not engaged in work, but are also not able to engage in any study.

Challenges to Vocationalization

Parallel to the diminishing demand for blue-collar workers is the failure of vocational education to meet new demands of society. It used to be the case that those who could not do well in academic studies were encouraged to carry out vocational training, such that they could finish their secondary schooling with some kind of technical skill, which would in turn enable them to earn a living. Indeed, this is the manifest aim of vocational education, career guidance, and retraining of the middle-age unemployed. However, in reality, many such vocational training programs are not broad enough to enable trainees to adapt themselves to the changing needs within occupations, let alone to provide them the broader capacity to lead flexible professional lives. In particular:

- There are occupations that used to be popular targets of vocational training, but technology has changed so much that they now require a higher level of generic skills that are not provided by vocational training or retraining (e.g. car repair).
- There are skills that are no longer necessary because of the change in consumer behavior, or because low-level training has become inadequate (e.g. television repair).

- There are other types of vocational training for which the technology and skills remain the same, but the labor market has given way to people with more general education because of the inflation of qualifications (e.g. electricians).
- The largest sectors of vocational training have disappeared simply because of the disappearance of entire industries from the city (e.g. clothing).
- Many of those occupations that used to require long-term (2–3 years) training now require only short-term training on the job and almost just in time (e.g. office assistance, information technology). In these cases, vocational training still exists, but does not constitute long-term comprehensive vocational education as a system.
- Because of the market pressure, vocational training programs often aim at occupations where immediate employment is more likely, but these are also areas where employment opportunities are more volatile. Graduates of such programs could easily lose their jobs very quickly.

Clearly, vocational training faces fundamental challenges if it is to remain active in the realms of manufacturing or manual labor, which are disappearing from the scene. In both cities, there has been a rapid expansion of higher education since the turn of the century. The rapidly expanding opportunities for higher education have also made vocational education a less preferred option for students and parents.

Challenges to “Subjects” and “Streaming”

Secondary schools in Shanghai provide science and arts streams at the senior secondary level. In Hong Kong, this is also the tradition, but with a more restricted choice of subjects. Many schools in Hong Kong now provide a third stream, known either as the Commercial Stream or the General Stream.

To start with, in both cities, the notion of a “subject” is very rigid, and has been taken for granted as the only path to acquiring knowledge in schools. Students typically learn six to ten subjects depending on the choice of the school and choice of the students. They learn only from these subjects and are prevented from acquiring other formal knowledge beyond these subjects, or more precisely, not included in the subject syllabi.

Streaming further narrows students' formal knowledge down to just a handful of subjects. Such streaming was a concept apt at a time when secondary schools were no more than preparation for higher education. Subjects in the science stream, apart from languages and mathematics, for example, are typically physics, chemistry, and biology. These subjects used to be the major streams in universities. Students were hence prepared as scientists. Students in this stream are deprived of studies of other subjects such as geography or history. Likewise, students in the arts stream typically study geography, history, and literature, and are deprived of contact with formal science knowledge once they finish junior secondary school.

It took a long time for Hong Kong's education system to introduce new subjects such as commerce or even economics in the secondary curriculum. Subjects have also been introduced that are related to, for example, fine arts, music or physical education, but very few schools and students choose these subjects. Other knowledge areas are simply absent in the secondary curriculum. In Shanghai, these still have not been introduced into the curriculum.

In the case of Hong Kong, the number of subjects are further restricted at the pre-university "sixth forms," i.e. the 17–19-year-old age group. Here, students typically take only two, three, or at most four subjects. If physics is among the subjects, for example, then the students would attend up to 9–10 periods a week on the subject. The cost is that the students, in two good pre-university years, are deprived of a large range of other learning experiences.

This early specialization goes against the general trend of building generic capacity as the basic mission of education. It also goes against a professional climate where much of specialized knowledge is learnt on the job, on demand, and just in time. Moreover, it is also incompatible with a general trend of individuals taking on multiple careers in their lifetimes, or changing jobs and tasks due to the shifts in technology or methodology in their respective fields. In a way, it is perhaps not exaggerating to say that early specialization deprives young people of the opportunities of more generalized learning that they will not have an opportunity for later in life.

On a final note, streaming or early specialization does not even fit the changing criteria of university admissions. For example, in 2003, Fudan University, the leading comprehensive university in Shanghai, started to reform its undergraduate program such that there was no specialization in the first year, and students are now allowed to choose a specialization by the end of the second year. There is a forthcoming modification to the university curricula in Hong

Kong as a consequence of change of the duration of the undergraduate program from three to four years.⁶

Challenges to “Study”

As mentioned earlier, education in traditional Chinese societies is synonymous with public examinations, which were basically about reading the classics and writing essays. In other words, education in Chinese societies is about “study.” This heritage is profoundly reflected in contemporary Chinese systems of education, except that the *Four Books and Five Classics* are now replaced by subjects that are shared by most other systems, and that reflect mostly science and humanities in the Western tradition. Hong Kong and Shanghai are no exception.

On the surface, there is an overwhelmingly large range of extra-curricular activities in Hong Kong and Shanghai.⁷ In terms of quantity and variety, such activities could make “after school” activities in U.S. look humble in comparison, and could perhaps only be paralleled by those in British independent schools. However, rich as they are, such activities are not formally recognized. General student life in schools in Shanghai and Hong Kong is still dictated by the formal curriculum, where examination is the most determining factor for learning, and learning often means studying to the tests and according to standard answers. The net effects of an almost pure concentration on “study” are multifold.

- First, young people are deprived of exposure to the broader universe of knowledge, as is also mentioned in the preceding section.
- Second, the notion of “study” often stops short at knowledge acquisition and does not engage in knowledge application, which goes against the contemporary understanding of human learning.
- Third, pure study deprives young people of the human activities that are most important for development of the social capacities that are so essential for survival in a post-industrial society, as is discussed earlier. Much of such development takes place during the secondary years.

⁶ This is a reform of the structure of the education system. Young people will be admitted to higher education at the age of 18 (instead of the present age of 19). The first batch of such admissions will occur in the year 2010.

⁷ See for example, a very good account of such activities in Shanghai, in Hon, R. (2003) *Student development and “deyu” in Shanghai: A case study*. Ph.D. thesis. University of Hong Kong.

- Fourth, the mode of “study” aims at achieving learning according to a standard path and standard outcomes. This inhibits opportunities for innovation and creativity, design, and exploration, which are the essential elements of work and life in post-industrial societies.

In sum, a fundamental contradiction is present in the education systems of both cities. On the one hand, the workplace, and hence the entire society, is moving towards higher flexibility, greater personal discretion, and more intensive human interactions. On the other hand, the education systems, and secondary education in particular, train students to follow pre-set paths and yield expected outcomes, to work according to rules and regulations, and with little learning of socialization skills.

V. REFORMING SECONDARY EDUCATION

As can be seen above, the changing economies and societies have caused major challenges to education in both Hong Kong and Shanghai. There are indeed continuous efforts in both cities to reform education, to move away fundamentally from what is obsolete, and to catch up with new social needs. While not all of the reforms are successful, the determination to explore new directions is still admirable, which helps make the reforms sustainable. In this section, we look at the efforts at reform in both systems, concentrating on secondary education. Since reforms in both cities have been a continuous endeavor, we pay more attention to the most recent reforms.

Hong Kong

Hong Kong's most recent education reform started in 1999 with a call for revisiting the aims of education due to the fact that of the seven reports produced by the Education Commission⁸ since 1986, few of the over 290 recommendations were seen as effectively implemented. It was recognized that there had been many "means," but the "end" was lost.

This revisiting of the aims of education led to a major comprehensive exercise to reform the education structure, the curriculum, and the public examination system. A series of policy documents was developed, all undergoing a rather elaborate, often repetitive, public consultation processes.

Secondary school entrance

The first thing the reform brought about was the abolition of a public assessment that governs secondary school entrance. The public assessment, known as the Secondary Schools Places Allocation system, was instituted in 1978 with the introduction of nine-year compulsory education. The assessment was based on internal school assessments of language and mathematics, which are "scaled," or standardized, according to the students' aptitude in an Academic Aptitude Test required for all students. Students in each school district (called "school net") are then divided into five equal segments, called bands, in ranking order of their standardized test scores, such that those with the best scores are given the first choice of schools.

⁸ The Education Commission is a policy advisory body that oversees the education system in Hong Kong.

The consequence of such a system, seen as scientific in the 1970s, was to allocate academically stronger students to better schools, hence widening the gap between schools.

Because of the high-stakes nature of the system, the abolition of this public assessment has effectively reduced undue pressure on the lives of primary school students. Although an allocation system has remained, there is a strong signal to secondary schools that mixed ability is the goal going forward. It is, however, mixed ability that has caused most concern among teachers.

Nonetheless, because of the allocation system, even after the abolition of the aptitude test, there is a visible disparity among secondary schools, accompanied by fears that the disparity is growing. This is seen as very unhealthy, because the society indeed expects most young people to finish secondary schooling and carry on with post-secondary education in one form or another. As mentioned earlier, screening is no longer seen as a legitimate function of secondary schools, but the system does not seem to have deviated from the screening paradigm.

Vocational education

In 1982, with the establishment of the Vocational Training Council (VTC), Hong Kong moved from a rather crude concept of skills training to a sophisticated system of technical and vocational education. The VTC operates Technical Institutes which prepare Technicians and Training Centers that provide short-term training, including the apprenticeship that is required by law.⁹ At one time, the vocational education facilities in Hong Kong were the most advanced in the region.

However, enrollment in vocational education has always been low. Even during the heyday of vocational education, enrollment in technical education or vocational training in VTC institutions amounted to less than 5 percent of the age-group equivalent of senior secondary education. This was perhaps due to a Chinese tradition in which only academic study was valued.

The golden days of the VTC did not last long. Since the 1990s, with the changes in the economy mentioned earlier in this paper, training of low-skilled labor has almost totally lost its market. For several years, the VTC struggled between the mandate of its mission and the reality of the labor market, which made such a mission obsolete. In any case, vocational training at the secondary level is no longer an attractive option for parents and students, simply because there is

⁹ Among selected industries.

minimal market for vocational graduates at this level. With the rapid growth of the service sector at the expense of the manufacturing sector, the labor market favors people with more general skills, such as English, Putonghua (the Chinese national language), and Information Technology, and favors “soft skills” rather than technical know-how.

Around the same time, there was almost a total collapse of the prevocational schools, which started with a junior secondary curriculum that was 55 percent vocational, divided into two or three skill sets. The vocational training at this level was even more detrimental because the students were seriously deprived of better opportunities for more general capacity building. In the late 1990s, the Hong Kong government decided to remove the label of prevocational schools and did not allocate students to these schools in a special category.

Since the turn of the century, the VTC has moved into mainly catering to the service sector. It has moved substantially to post-secondary training, as well as partnering with secondary schools in providing students with some workplace experience (known as career-oriented study—a part of the curriculum reform). Meanwhile, with the phenomenal growth of Hong Kong-related industries across the border in the Pearl River Delta, there are also plans to train skilled manpower for such industries, where the trainees could come either from Hong Kong or from the Chinese mainland.

Curriculum and public examinations

The most dramatic reform in Hong Kong is the proposed change in the curriculum. The reform can be categorized into three integrated dimensions: change in the structure of the education system, change in the curriculum, and change in the public examinations.

The reform is underpinned by a new understanding of *learning*. The reform follows the global consensual understanding that learning is the learners’ active construction of knowledge, that learning is therefore a matter of learning experiences in meaningful activities with practical values, and that humans also learn from other human beings. With this in mind, there has been a revolutionary framework that blurs the subject boundaries, and replaces “subjects” with learning experiences¹⁰ in eight *Key Learning Areas* (KLAs).¹¹

¹⁰ There are five identified learning experiences: moral and civic education, intellectual development, community services, physical and aesthetic development and career- or workplace-related experience.

¹¹ See Curriculum Development Council (2001) *Learning to learn: The way forward in curriculum*. Hong Kong Government.

The KLAs include Chinese language, English language, mathematics, personal, social and humanities education, science, technology, arts, physical education, and general studies. The idea is for each student to concentrate initially on the languages (Chinese and English) and mathematics, and to carry out only selected studies in the realm of science and/or humanities. Liberal studies are introduced as an opportunity to practice discovery and to apply critical analysis to social and political issues. There have been debates about the newly emerging liberal studies program, and there is a general preference for using it to create opportunities for broad knowledge acquisition and critical thinking.

Given that screening would no longer be a major social function of secondary education, the reform proposed the change of the 3 + 2 + 2 + 3 system to one of 3 + 3 + 4, which in reality would move away from the British model of two-stage screening before university entrance.¹²

According to the reform, there will be only one public examination at the end of the new senior secondary education.¹³ Consequently, the design of the examination will become a major element in the success of the proposed curriculum change. As was mentioned earlier, examination plays a predominate role in Chinese communities. Instead of playing down the examination, serious efforts have been made to reform the examinations, such that they reflect as much as possible the desired learning experience. One such experiment uses student portfolios in place of one-off examinations in schools. Another reform attempt introduces school-based assessment; however, this runs the risk of provoking teacher opposition because of the increase in workload.

The reform also tries to compress the time used for the formal curriculum, while creating room for all sorts of student activities as part of “life-wide learning.” This broader approach to learning is based on the belief that student development, particularly the inculcation of values, attitudes, principles, and so forth, which have become so essential in the workplace, should become a central part of secondary school learning.

The reform is quite comprehensive in nature, but it has just begun. The impact is intended to be comprehensive, and hence, understandably, it has to endure difficulties and controversies.

¹² See: Education and Manpower Bureau (2005) *The New Academic Structure for Senior Secondary Education and Higher Education*.

¹³ The screening is further weakened by the sudden growth of community colleges offering associates degree programs. Higher education enrollment increased from around 30 percent in 2001 to 66 percent in 2005, as was mentioned earlier. The dramatic increase in post-secondary studies helped to reduce the unhealthy pressure placed on secondary school students.

This is particularly so in Hong Kong where freedom of expression has made simple consensus almost impossible. Nonetheless, since the launch of the reform in 1999, there is admittedly a very significant change in the discourse among educators, from one revolving around teaching to one revolving around learning, from test results to learning experiences, and from study to learning activities.

School improvement

Since the early 1980s, school improvement has predominated as the general global ideology in pursuance of quality education in schools. Hong Kong joined the tide with this thinking in 1991 when the School Management Initiative (SMI) was introduced. This was the first attempt to tackle school management as a government policy. SMI represented a strong element of school autonomy or flexibility, in anticipation of more room for school improvement. The scheme itself could not claim great success, but a general change in the awareness and consciousness of management and improvement of schools has arisen as a result of it.

Again, reflecting the global trend in accountability, quality assurance measures came hand in hand with decentralization or delegation of school powers. Along these lines, there was an introduction of the Whole School Inspection which has evolved into a system of self-evaluation plus voluntary external evaluations. There is also an endeavor to publicize school profiles on the web, hence increasing the transparency of school operations. All of these initiatives have been welcomed by many, but also objected to by just as many.

The school improvement movement has recently evolved into a government campaign to gradually incorporate schools as legal entities. This process has aroused so much controversy that the Catholic Bishop decided to take the government to court. The controversy arises from a tradition in which NGOs (including many church bodies) run schools with full government subsidies, enjoying the freedom of school ownership as a happy partnership. The process of incorporation, which requires the presence of parent and teacher representation among the school governors, is now seen by the NGOs as an infringement on their autonomy and a deviation from the faithful partnership. While incorporation includes built-in incentives of financial freedom to entice schools to become incorporated, more aggressive financial devolution is withheld because of strong union opposition.

This controversy is further fueled by demographic change. The size of an age cohort has declined almost by 50 percent in the past twenty years.¹⁴ As a result, debates are colored by unionist arguments based on teacher benefits rather than student learning.

Meanwhile, there has been major government undertaking to provide professional opportunities for the enhancement of school leadership among principals. School principals now have to undergo a licensing process before they can assume leadership in schools. There are networks of principals, and all types of upgrading opportunities for practicing principals,¹⁵ as well as preparatory programs for aspiring principals.

As is evident, there have been various efforts to improve school management and to enhance the quality of principalship. However, there is still the general perception, supported by ample evidence, that the disparity among schools remains tremendous. There are still schools that are poorly run, and which indeed fall below standards of a tolerable minimum. This disparity among schools has become the major reason for parents' anxieties and general dissatisfaction with the school system.

Shanghai

Secondary school entrance

The reform in Shanghai in terms of secondary schools entrance is more thorough-going than Hong Kong. Since 1994, Shanghai has pioneered a program of “neighborhood attendance.” This means that students attend junior secondary schools in their respective neighborhoods, and that schools are obliged to admit students according to their place of residence. This aroused some controversy in the beginning, but such controversy soon subsided.

The success of neighborhood attendance has to be qualified, however. First, there was indeed an earlier decision by the national government to abolish the notion of “key schools”—schools that received priority resources from the state—as part of various government efforts to eliminate privileges to a handful of schools. Since then, Shanghai has seen a continuous improvement among “under-performing schools” and hence parents have become comfortable

¹⁴ The age cohort of school children dropped from around 90,000 in the mid-1980s to just above 50,000 in the 2000s, and is still in the decline. The fertility rate is only 0.95..

¹⁵ There is a requirement of 150 hours of professional development activities to be undertaken by each school principal.

with the notion of neighborhood attendance. Second, despite the rather equalized standards among schools, there is still a culture among parents to opt for the best schools. This has led to the Chinese version of school “choice,” whereby students are admitted to preferred schools in other neighborhoods by paying a fee. Third, although people are now used to neighborhood attendance for junior secondary schools, there is still an allocation system for admitting students to senior secondary schools. Because of the neighborhood attendance for junior secondary admissions, senior secondary admission has become the first opportunity for competition, making the competition at this juncture extremely acute.

Vocational education

Shanghai’s vocational education has undergone several rounds of evolution since the opening of China’s economy in the early 1980s. In 1980, when almost all of the enterprises in China were still state-owned, and hence vocational education acted merely as training to fulfill manpower needs for the national Five-year Plans,¹⁶ Shanghai started the first Vocational High School whose graduates did *not* abide by national manpower plans. This initiative was almost rebellious because graduates of these schools would not be assigned a job, and hence ran the risk of either working in highly paid emerging sectors of the newly opened economy, or facing unemployment. However, in hindsight, the opening of the first vocational high schools was indeed a milestone for education as it moved away from state-assigned jobs.

Over time, there was a gradual move of popularity away from schools that would guarantee jobs and toward those that would be high-risk but could lead to high pay. This trend emerged at a time when conventional vocational schools (Specialized Secondary Schools and Craftsmen Schools) assigned graduates to jobs according to state manpower plans. In the decade that followed, China gradually abolished job assignment altogether and by the mid-1990s, the entire job-assignment system was abolished in Shanghai.

Because of the opening of the economy, and because of the high adaptability of the vocational schools to the rapidly changing job market, the vocational sector once constituted 72 percent of the entire student population at the senior secondary level in Shanghai. However, things in Shanghai change very quickly. With the rapid shift in the economy and the growth of

¹⁶ There were the Specialized Secondary Schools which operated at the senior secondary level and trained technicians, and the Craftsmen Schools, which trained craftsmen as skilled workers in factories. The former were

the service sector, the job market quickly changed in favor of people with generic skills and vocational education began to lose its popularity. The decline in enrollment in vocational education was exacerbated by the national policy to expand higher education. Since 1999, there has been a mandatory expansion of higher education by which higher education intake doubled in a matter of four years.¹⁷ The dramatic expansion in the supply of higher education places has inflated the demand for higher education in the society even more. This has been particularly true in Shanghai where the enrollment ratio has approached 75 percent for all forms of higher education. Consequently, most parents opt for general academic secondary education in anticipation of university entrance.

As in Hong Kong, and for the very same reasons, vocational education in Shanghai now faces severe challenges. At the same time, there has also been a complementary trend of general senior secondary schools adding vocational or professional components to their curricula. Many schools, for example, have experimented with a 3 + 1 model such that graduates from the academic schools can benefit from an additional year of vocational learning, which usually leads to certification of one kind or another. Some more progressive schools have also practiced what is known as “one diploma, many certificates,” in which the diploma refers to a graduation diploma and the certificates to public professional certificates. This model applies more to schools with students who are academically more able.

Curriculum and public examinations

In China, there have been continuous reforms in the secondary school curriculum and the public examination system ever since the re-establishment of the formal education system upon the ruins of the Cultural Revolution.¹⁸ Shanghai has always been on the cutting edge by moving ahead of other parts of China. For instance, Shanghai was the first province in China to establish its own higher education entrance examination. This process was initiated in 1985 when Shanghai felt it would suffer if it were to be assessed together with other provinces which were much less developed than it was—an attempt towards establishing a meritocracy. Shanghai was also the first to introduce a public certification examination at the end of secondary schooling.

usually owned and run by the various industrial departments in the municipal government. The latter were operated by enterprises as part of their training mechanism.

¹⁷ In 1999, there was a national directive for all higher education institutions to increase their first year intake by 50% over the previous year. There was another increase of 25% in 2000, and 15% in 2001. While the national government tried to contain the expansion in 2002 and 2003, there were real growths in intake by 22% in each year.

Such certification provides many students with some recognition even if they are not admitted to an institution of higher education.

Shanghai has benefited a lot from the national reforms in examinations. Since 1999, a 3 + X model was introduced in the national higher education entrance examination. This is a national reform in which the number of examination subjects are reduced to four or five, with the core of Chinese language, mathematics, and foreign language (which is now normally English), plus X=1 or X=2. Shanghai, as a municipality, has chosen to opt for X=1 where the 1 is a single paper which requires integration of all the knowledge in other subjects. This has greatly elevated the targets for learning. It goes against the traditions of memorization and standard answers and follows constructive theories of learning.

Shanghai has also pioneered curriculum reforms. In 1988, when China opened up textbooks to diversity for the first time,¹⁹ Shanghai had already moved ahead of the national policy. In English language, for example, three sets of textbooks with rather distinct designs were available in Shanghai. Meanwhile, Shanghai also moved one step further to diversify the curriculum. Among other things, the rather difficult subject of political ideology was redesigned to become a set of five subjects: life-knowledge (for primary children), civic education, social studies, career guidance, and principles of Marxism.

Shanghai has been very strong in the areas of initiating major curricular reforms and mobilizing and training teachers to implement those reforms. Compared with Hong Kong, Shanghai has a strong organization of schools and teachers, and has little difficulty securing consensus.

School improvement

As mentioned earlier, since 1994 with the introduction of “neighborhood attendance,” Shanghai has spent substantial efforts improving the weaker schools and hence reducing parents’ anxiety. One of the major exercises to this end was to provide some such schools with a piece of land and the capital cost in order to rebuild the school. In the end, the school is totally overhauled, hence reducing disparities among schools.

¹⁸ 1966-1976.

¹⁹ Before 1988, there was only one single syllabus for the entire nation, and one single of textbooks. In 1988, there is a call for “single syllabus, multiple textbooks” which is a breakthrough in the uniformity in the curriculum.

During this process of school improvement deliberate government policies were implemented to turn public schools semi-private. In what are called “converted” schools, the public schools that were rebuilt were also given the liberty to charge fees. In 1999, 53 schools were converted, including both senior and junior secondary schools.²⁰ There have been controversies about the converted schools, mainly due to the fee-charging, which makes these public schools superior to other public schools. Nonetheless, by way of standardized hardware and centralized deployment of teachers, disparity among Shanghai schools is much less than in most urban cities in the region.

Another move in school improvement is the inclusion of boarding facilities in some of the pioneering schools. In 2005, 11 such schools were to become boarding schools.

Meanwhile, there have been constant reports about good practices in school leadership. In the case of a school known for its “Success Education,” the principal insists on admitting only the academically poorest from the 30 odd primary schools in the neighborhood. By allowing the students to start from low entry points, but also by expecting them to move in larger steps, the school has indeed succeeded in transforming students’ performance as well as their aspirations.

Shanghai was the first to introduce a principals’ license as a prerequisite for principal appointments. The principals’ network in Shanghai is in reality one of the strongest community of professionals among educators. Unlike principals elsewhere, principals in Shanghai are often teachers who are admired by their peers, but who are also ready to publish in magazines or journals.

²⁰ Shanghai Education Committee (2000) *Shanghai Education Yearbook 2000*, , Shanghai Educational Press, 182.

VI. RETHINKING THE ROLE OF SECONDARY EDUCATION

For a very long time, secondary education in both cities served only two manifest purposes: preparation for higher education and preparation for employment. In Shanghai, even the latter was not valid.

In hindsight, such traditional purposes of secondary education were consistent with the emphases on division of labor and the reliance on credentials in industrial societies. Almost around the world, regardless of what educators would think, the purposes of secondary education were preparation of the young people for the next stage in life (i.e. either higher education or employment), and little regard was paid to their lifelong needs. People have lived with such a purpose of secondary education for many years and as such there has been a neglect of the role of secondary education as a necessary phase of personal development for life.

With the coming of the knowledge society, there is a perceived need to revisit the purpose of secondary education in the context of (a) almost universal attendance in secondary education in both cities; (b) few job opportunities for fresh secondary graduates; and (c) a majority of the population having to undertake lifelong learning.

Hong Kong

It is safe to say that in Hong Kong, secondary education is basically perceived as a means to prepare students for higher education. In Hong Kong, the attendance at the secondary level is above 90 percent and over 95 percent if all types of vocational education are also considered. In other words, the majority of the population has undergone some phase of secondary education.

In Hong Kong, there has been a very advanced system of vocational training, but the actual size of the sector is very small—only about 5 percent of the age cohort. In recent years, jobs that are warranted by vocational training have become increasingly spare, creating tremendous pressure for vocational training, regardless of its quality, to move in new directions.

It used to be the case that secondary graduation was a legitimate exit point into employment. In recent years—since the mid-1990s—secondary graduation has no longer warranted a job. This shift only reinforces people's desire for general secondary education as a prelude for higher education.

Most students opt for general school education in aspiration for higher education. They enter the job market only in reaction to failures in the school system, and many of them struggle on until they attain something comparable to higher education: to become a public accountant, an insurance agent, a real estate agent, or by doing a degree through the open learning programs offered by local or overseas institutions.²¹ There is a strong desire for continuing learning in the society, despite the government's policy of containing expansion of higher education. In reality, surveys reflect that over 22 percent of the working population is engaged in some type of part-time learning program.²²

There is a government policy of curbing the development of higher education despite high demand. The government policy, in 2001, was to maintain enrollment ratio at 18 percent of the age cohort for university education, but to gradually expand the overall post-secondary level enrollment from 30 percent to 60 percent in ten years. This was a very modest expansion when compared with societies of comparable economic status, where higher education is becoming available to a much larger percent of the population.²³

Tertiary enrollment had increased from 30 percent to 66 percent by 2005, however, in a matter of only four years, due to the emergence of community colleges and regardless of government policies. There is a clear demonstration that people's aspirations are shaped by societal needs, and could outgrow government plans. That Hong Kong is a free city has made such competition between social and government aspirations very visible.

Shanghai

The development of secondary education in Shanghai differs from that of Hong Kong, but points in a similar direction. Shanghai has also witnessed a near universal attendance in higher education, following the Chinese pattern of parallel types of schools at the senior secondary level: general schools and three types of vocational schools.

In the 1980s, during the first decade after the economic reform, there was a shift in student choice from general education to vocational education, very much because of the limited

²¹ Shen, S.M. (2001) *Survey of part-time learning in Hong Kong*. Hong Kong University School for Professional and Continuing Education (SPACE).

²² *Ibid.*

supply of tertiary education, but also because of the shift from planned to job market employment. The recent years has seen a reverse shift to general education and a crisis in vocational education. This is partly because of the national policy of dramatically expanding higher education, but also because, similar to the case of Hong Kong, there are not many jobs left for new secondary graduates. This change is perhaps more visible in Shanghai, because by convention, the sole responsibility of general senior secondary schools is for preparation for higher education. There is no employment category for general secondary graduates.

Recent attempts have been made to add an additional vocational element to general secondary education. Such an element is not meant to substitute for the secondary curriculum, and hence has led to the notion of 3 + 1 in the duration of senior secondary schooling. Such a move has the dual advantage of increasing young people's employment opportunities as well as delaying their employment for another year.

However, before the success of such attempts was tested, the phenomenal expansion of higher education had driven most students to move on to higher education rather than employment. Following the national policy of expansion, Shanghai has almost doubled its higher education student population in the past four years.²⁴ Shanghai's institutions also admit students from other parts of the nation, giving them more latitude for enhancement. As of 2004, around 75 percent of the age cohort had access to higher education in one way or another.

There is also a strong trend and sophisticated system of continuing education among the working population.²⁵ There is again a struggle between government policies, the rapidly changing larger environment for education, and the rapidly growing need for learning. Unlike Hong Kong, Shanghai has taken a more proactive role and has applied rapid changes to policies in the process of facing such challenges.

²³ Both Taiwan and Korea have come to a stage where there is nominal oversupply of higher education. That is, the number of places in higher education exceeds the number of secondary school graduates. Japan is coming near to such a situation. In Korea, the enrollment ratio for higher education is 87% in 2004.

²⁴ There was spectacular expansion of admissions in consecutive years: 50% in 1999, 25% in 2000, and 15% in 2001. This was required by the national government.

²⁵ Cheng, K.M, X, Jin and X, Gu (1999) "From training to education: Lifelong learning in China". *Comparative Education* 35 (2), 119-129. There is a case study of Shanghai.

Secondary vis-à-vis lifelong learning

In both cities, secondary education has become a necessary part of the population's lifelong learning. The system should be so designed to reflect such a reality.

If we revisit the expectations in the workplace, as is mentioned in the previous sections, they tend to concur on the quality of the person: ability to learn new things, to work in teams, to communicate effectively, to manage oneself, to question and to innovate, to assume personal responsibility, and so forth. These are attributes that are not necessarily encompassed in the primary aims of higher education, but most of these personal attributes are developed among young people during the formative years when they receive secondary education.

There are other personal attributes of lifelong significance, but which are not necessarily direct requirements of the workplace. These may include: optimism about life, passion about nature, commitment to society and the nation, perseverance against the odds, readiness to expand one's capacity, experience in adventures, experience in organizing, leading and following, appreciation of the arts, attitude of helping and caring, attention to detail, eagerness to interact with people, ability in a second or third language, some experience of science discovery, some experience of social investigation, love for peace, sense of justice, consciousness of equity, awareness of and empathy for the deprived, comfort with other cultures, basic understanding of sex and family, experience of moral dilemmas, belief in rationality, tolerance of diversity and plurality, and so forth, just to pick a few. All of these are admittedly essential for life in contemporary societies, but many are arguably achievable during the secondary years.

It is a matter of common knowledge that secondary schooling matters significantly in one's personal growth. University students from different secondary schools perform differently. Employers have a very good sense of differentiating graduates from different secondary schools, even though they have undergone higher education. Secondary education therefore has an undeniable yet unfulfilled role to play. Consequently, such a role should be distinctively different from a secondary system whose major responsibility is preparation for higher education and employment. The entire notion of secondary school lives should be redesigned.

The curriculum reforms in both cities seem to point in the same direction—that of a general shift in orientation from concrete knowledge and skills to generic abilities, and from examination results to learning capacities.

Schools in both cities enjoy the strong tradition of extra-curricular activities and “moral education” taken in the broad sense to mean student development. Such a tradition perhaps should be reassessed and given more weight in students’ academic lives, because it is at this time that students develop many of their personal attributes.

Reforms in both cities also call for reform in the terminal assessment of students upon secondary school graduation, so that assessment criteria move away from selection for higher education. Higher education institutions are also expected to reform their admissions policies, hence playing a crucial role in facilitating a more realistic secondary learning life, something that would eventually benefit higher education in the long run. In a sense, secondary education should be seen as the third segment in a four-leg relay race: it contributes to the final development of the person no less than any of the other phases of learning.

VII. CONCLUSION

Hong Kong and Shanghai are two of the most quickly changing cities in Asia. They are both Chinese communities and have inherited similar cultural traditions. Among other things, both cities enjoy high aspirations for education among their citizens. Due to this similar cultural heritage, education is often understood as a means for social escalation, which is translated into passing examinations and advancing to higher education. Such a tradition has facilitated the development of the education system, but has also created undue examination pressure on the lives of students, which is particularly serious at the secondary level when examinations for higher education admissions are imminent.

Both cities are moving rapidly towards a domination of the service sector in the economy and there has been a correspondingly rapid change in the manpower structure and manpower requirements. Both cities are quickly losing jobs for the operative blue-collar workers, and are increasingly in need of people with general and intellectual capacities. Conversely, individuals are facing challenges of an ever-changing workplace environment and expectations. Specialized education is still necessary, but may often fulfill only short-term needs. Generic capacity is essential both as a social demand and an individual need; yet, generic capacities are mostly acquired during the teenage years. Hence, secondary education has an essential role to play in order for the community to support a knowledge society, and so that citizens can have meaningful working and learning lives.

In this context, there has to be a reassessment of the nature, goals, and contents of secondary education. Both cities have done tremendous work in this direction. The most significant dimension is the reform of the curriculum, where the general tendency is to move away from fragmented feeding of specific knowledge toward establishing learning experiences that have long-term significance.

Both cities face challenges to their vocational education sectors. Vocational education in the traditional sense has lost its roots in the workplace reality, and has lost its attraction to young people. New modes of “training,” often within the framework of lifelong learning, have emerged as the main thrust in preparation for specific knowledge and skills. Therefore, in both cities, the development of lifelong learning has been spectacular.

Coming from different political heritages, the two cities have followed different paths in reforming their secondary education. However, both cities continue to evolve. The Hong Kong SAR government, which was used to non-interventionist ideologies, has recently moved toward taking on a more proactive and coordinating role in reforming education, running the risk of eroding the spontaneity at the grassroots which has been the fundamental drive for the city's development. The Shanghai government still plays a planner's role, but has deliberately introduced liberal and market elements in its policies for reforming education, the risk of undermining the socialist ideology notwithstanding. It will be interesting to observe how the modes of reforming secondary education evolve in the two cities.

The Chinese school system has a short history of less than 200 years, and even less than that in Shanghai and Hong Kong. It was created at the high point of the industrial era, when division of labor was the fundamental doctrine organizing the society. The secondary school system is part of that institution. On the one hand, it serves the function of classifying people according to occupation and rank, and hence tends to pigeon-hole people rather than to expose them to opportunities. From another perspective, secondary schools are themselves organized according to division of labor, in terms of partitioned knowledge (subjects), specialized teachers, classified population (by classes and by grades), and structured timetable. All these would be seen as obsolete ways of doing things in other sectors of the society. In order to match the rapidly changing society, education, and secondary education in particular, has to undergo fundamental reforms.

Most countries invest heavily in secondary education and many developing countries are making great efforts to expand secondary enrollment. It is legitimate to ask: *Is it sufficient to do what we are now doing in secondary education, only more and better? Are we carrying out the right kind of secondary education? Will our secondary education, as it stands, bring the nation to a new level of development? Will our secondary education, as it stands, enable our citizens to live a quality life?* All education policy-makers should ask these fundamental questions when creating, implementing, or evaluating policy.



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Hong Kong and Shanghai are the two major metropolitan urban centers in China. Both cities are known for their vibrant pace of life, the entrepreneurship of their people and the rapid pace of development. Yet, under the scheme of “one country two systems,” people in these cities live under markedly different political and economic systems. Having taken rather separate paths of development, both cities have become economic hubs hosting an incredible number of international enterprises. Nonetheless, both cities face major challenges in their development and people, sometimes narrowly seen as human resources, are recognized as the most essential asset for the cities to sustain their development.

In this context, both cities launched major education reforms over the few past decades. This paper focuses specifically on reforms of secondary education, the most fundamental part of these education reforms. Hong Kong and Shanghai didn’t follow the same path of secondary education reform, sharing various commonalities as well as differences. Still, they exemplify the situation of many rapidly emerging post-industrial societies in the midst of secondary education system reform.

This paper attempts to describe and analyze the development and reforms of secondary education in Hong Kong and Shanghai over the past 25 years. Comparing the reforms helps construct a spectrum of possibilities on the one hand, and identify common themes in the development of secondary education on the other. The commonalities and differences, the experiences and lessons, should shed lights on secondary education reforms in other parts of the world.

The findings, interpretations and conclusions expressed in this paper are entirely those of the authors and should not be attributed in any manner to the World Bank, its affiliated organizations or to the members of its board of executive directors or the countries they represent.

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