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Chapter 15

SCHOOLING IN TAIWAN

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INTRODUCTION OF TAIWAN

For centuries, Taiwan was referred to especially in the West as Formosa. At present it is officially recognized in Taiwan as the Republic of China, and in mainland China, as a renegade province of the People's Republic of China. Despite this, it is universally renowned for its breathtaking natural scenery and its miraculous economic development earned it the title of an Asian Tigers, one of only four. In the mid-16th century, when their ships passed through the Taiwan Straits, the Portuguese became amazed at the forest-cloaked island, and shouted out, "Ilha Formosa," meaning "Beautiful Island." This marked the first of many encounters between Taiwan and the West. According to the Chinese, Taiwan was called Yizhou or Liuqiu in ancient times and different dynasties set up administrative bodies to exercise jurisdiction over Taiwan from the mid-12th century. The Dutch East India Company occupied Peng-Hu (an off-shore isle of Taiwan) as a trading harbor base for her East Asian business dealings in the 17th century. In 1622, a war broke out between China's Ming Dynasty government and the Dutch troops. As a result, Taiwan was colonized by the Dutch from 1642 to 1662. After 1662, the Dutch were defeated by a former Ming government official, Zheng Chenggong, who used Taiwan as a military foundation against the Qing government. From 1662 to 1683, Taiwan was under the reign of Zheng's family. In Zheng family's 23-year sovereignty, Taiwan once again underwent social reconstruction and economic development. It was once known as the "Taiwanese Kingdom" or the "Kingdom of Formosa" by the English East India Company (National Institute for Compilation and Translation, 1997). After 1683, Taiwan came under the control of the Qing Empire when Zheng was defeated by Chi-Lang, the Qing general. It was the first time that Taiwan was reclaimed officially by the Chinese government. In the mid-19th century, the European countries threatened China in the Opium War of 1840 which led to

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China's loss of Hong Kong until 1997. Although the Qing government took a more positive attitude toward Taiwan's development, Taiwan was ceded to Japan under the terms of the Treaty of Shimonoseki after 1895, and remained under Japanese colonization for half a century.

Taiwan was returned to China after 1945 and once again after the defeat of Japan in World War II. Nevertheless, following the Chinese communist party takeover of the Mainland in 1949, Taiwan became a shelter for Mainlanders who supported Nationalist (Kuomingtang, known as the KMT) leader Chiang Kai-Shek (Cooper, 2000). Nearly two million Chinese civilians, government officials and military troops relocated from the mainland to Taiwan.

Over the next five decades (1949–2000), the ruling authorities gradually democratized and incorporated the local Taiwanese within the governing structure. In 2000, Taiwan underwent its first peaceful transfer of power from the Nationalists to the Democratic Progressive Party (DPP). Throughout the period 1980–2005, the island prospered and became one of East Asia's economic "Little Tigers." The dominant political issues across the island remained the question of eventual unification with mainland China, as well as domestic political and economic reform.

Geography, Population, and Economy

Taiwan's total land mass occupies 35,980 sq. km. The population growth rate was estimated at 0.63 percent in 2005, with a GNP in 2004 of NT$463,056 (US$14,032) (Directorate-General of Budget, Accounting and Statistics, Executive Yuan, ROC, 2004). According to J.F. Cooper (2000), Taiwan's population is comprised of four cultural and ethnic groups. They are Taiwanese (Hokkien and Hakka) 84 percent, mainland Chinese 14 percent, aboriginal 2 percent. Each group has its own dialect and cultural perspectives. Taiwan used to adopt the doctrine "Three Principles of the People" invented by her founding father, Dr. Sun-Yat Sen in 1905. Since the 1990s, Taiwan has enjoyed a dynamic capitalist economy with gradually decreasing government control of investment and foreign trade. In keeping with this trend, some large government-owned banks and industrial firms have been incorporated and privatized. Exports have provided the primary impetus for Taiwan's development. The trade surplus has been substantial up to 2004, and foreign reserves were among the world's top 10 in the 1990s. Agriculture contributes less than 2 percent to the GDP, nowadays, in contrast with 32 percent in 1952. Taiwan is also one of the major investors throughout Southeast Asia. The Chinese mainland has overtaken the position formally held by the United States as Taiwan's largest export market. Growing economic ties with the mainland since the1990s have led to the successful move of much of Taiwan's assembly of parts and equipment for production of export goods to developed countries.

Taiwan Education

In 1922, the American "six-three-three-four" system was implemented in mainland China: six years in elementary school, three in junior high, three in

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senior high, and four in university. Since the Nationalist government's relocation to Taiwan in 1949, this system has continued.

Since the 1950s, Taiwan encountered political and military uncertainty across the Straits, but between 1957 and 1980, the emphasis shifted to the planning and development of human resources in tandem with the national goal of economic development. Additional challenges to the education system came in response to the forces of economic liberalization and globalization which have transformed Taiwan since the 1980s. Taiwan's educational system entered an era of transition and reform as the nation's industrial structure shifted from a labor-intensive to a capital and technology-intensive base, and political democratization intensified.

A BRIEF HISTORY OF TAIWANESE EDUCATION

Prior to colonization by Japan, there were some forms of primary, secondary, and specialized schools for different purposes. Under the Japanese, a formal education system was established in 1919. Before then, the Japanese government issued the "Taiwanese Education Act" that divided the education system into four categories: general, vocational, specialized, and normal (teacher) education. At the general education or primary level, there were public schools, upper general schools, and girls' high schools. All of these admitted children between the ages of 7 and 13. Students were to learn knowledge and skills for life and basic needs. Not until 1943, was six-year compulsory education implemented. By that time, the enrollment rate for primary school level in Taiwan was 71.3 percent versus 99.6 percent for Japanese children (among the highest in Asia). After World War II, when Taiwan was returned to China, an Act regarding compulsory primary education in Taiwan was issued in 1947. By 1968 compulsory education was extended to 9 years and by 1984, both the primary and secondary education enrollment rates had reached over 99 percent (Directorate-General of Budget, Accounting and Statistics, Executive Yuan, ROC, 2005).

Taiwanese education has been very much influenced by Confucianism. According to Tu (1995, as cited in Zhou, 2000), East Asian societies continue to be very much influenced by Confucian values such as political authoritarianism, family system, examination systems, saving habits, local organization, and human networks (Tu, 1995, as cited in Zhou, 2000). Therefore, education has been regarded as a priority in Confucian culture. Study involves hard work, effort, persistence, cultivation, and rigidity, whereas game playing is considered idling. The learning attitude for most students was expected to be one of diligence coupled with hard work and effort (Zhou, 2000).

As a result, Chinese society in Taiwan, places an emphasis on credentialism and examination systems. The Imperial Examination in ancient China (694–1895), which lasted for more than 1,000 years, had three social functions: First, to diminish the effect of social and family origin on social mobility. Second, to enforce the social control of the ruling class, by selecting intellectuals for the governing class through public examinations. Although the Chinese Imperial

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Examination was abolished in 1905, Taiwan is still under the influence of this examination tradition. As a result, these examinations are expected to be fair and allow social upward mobility.

A cooperative research project involving Taiwan, Hong Kong, Singapore, and China (Zhou, 2000) found schools in the Pacific rim to have a common high regard for credentialism. Parents value their Children's academic performance highly and are actively involved in school affairs. The school curriculum is highly geared toward school examinations. School accountability is usually judged by examination performance. Consequently, most secondary schools provide examination preparation programs for children after school. There is a common belief that students with better academic achievements will enjoy higher incomes.

The following paragraphs discuss three major educational issues in modern Taiwan education. They are: globalization versus localization, gender stereotyping, and equity of educational opportunity.

Globalization versus Localization

Education system in Taiwan, similar to other education systems in East Asia, has undergone an enormous transformation over the last two decades. Education has become interconnected with trends of globalization and internationalization, development of information communications technology, and a set of political, sociological, economic, and management changes. These changes together produce multifaceted influences on education in Taiwan. In particular, the ideology of globalization and localization acts as one of the driving policy agenda in Taiwan.

The notion of globalization encompasses a plethora of meanings. According to Mok and Lee (2000: 362), globalization is "the processes that are not only confined to an ever growing interconnectedness and interdependency among different countries in the economic sphere but also to tighter interactions and interconnections in social, political and cultural realms." Governments in Taiwan have endeavored to follow the trend of globalization, especially in education.

In the efforts of Taiwanese educational globalization, English instruction was very much emphasized throughout primary and secondary education. In earlier history of education in Taiwan, English was only instructed in secondary schools as one of the compulsory classes. However, as to follow the trend of globalization and to connect with the world internationally, Taiwanese government started to push second language instruction into primary schools, targeting fifth and sixth graders in the elementary level in 2001, in order to cultivate their youth to become internationally competitive.

Another significant measure under the influence of globalization is the nine-year spiral curriculum reform in secondary education taken place in 2001. The objective of this curriculum reform program is considered the backbone of the major educational reform during the last decade. Its major goals are to promote cultural learning and international understanding as well as other demanding abilities for

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the 21st century. In order to achieve educational globalization, related issues and ideas were implemented within secondary curriculum in subjects such as civil and social studies.

Ministry of Education (MOE) also stressed globalization in higher education. Taiwan followed the world trend of higher education globalization, redirected the aim of education toward market-oriented. Lessening government control and integrating social demand with market forces, Taiwanese education in the 1990s has been influenced by globalization to a great extent. Also, began in 2003, MOE started to promote a "World Class Research University" project, proposing to upgrade at least one of the universities in Taiwan be ranked among the top 100 leading international institutions of higher education within the next 10 years. Universities are required to establish a system of evaluation using methods as the SCI, SSCI, and the EI, or to be in accordance with the standards that meet international recognition for awards, achievements, and contributions within their field of expertise. In 2005, MOE granted NT$50 billion (equals US$1.56 billion) to 12 universities in the following five years to empower their research capacity to reach the world class level.

On the other hand, Taiwan has also strived for localization along with the globalization trend since the 1990s. As Giddens (1994) yielded, globalization concerns localization. The two concepts can be viewed as two sides of the coin that jointly shape the identity of self and the nation. Besides globalization, Taiwan itself has confronted with the demand of education localization within the country. This can be dated back to 1945, when Taiwan was under Japanese ruling. Under Japanese administration (1895–1945), the purpose of Taiwanese education was to assimilate local people into Japanese culture. After the restoration of Taiwan to China in 1945, the urgent mission of the Taiwan authorities was to abolish the effect of Japanese colonialism on Taiwan by setting up a new education system for the advancement of Chinese national identity (Yang, 2001: 204). There was a process of Chinese-oriented education which emphasized education for preserving Chinese culture and the national language, Mandarin. The American "six-three-three-four" system was adopted in Taiwan after World War II. Therefore, in the latter half of the 20th century, Taiwanese education went through a series of nationalism campaigns that drew heavily on Chinese culture and economic rationalism striving for western efficiency and effectiveness.

After 1949, the priority was to strengthen Chinese identity as means of eventually reasserting sovereignty for China over Taiwan. During that period of time, indigenous Taiwanese cultures and languages were banned especially after the "228(February 28th) incident" in 1947 which involved violent suppression by KMT troops of the Taiwanese people.

Since the late 1980s, Taiwanese society has gone through a period of localization involving the renovation of Chinese identity with Taiwanese heritage and tradition. These trends of indigenization or so-called localization stem from historical complaints against KMT authoritarianism.

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During the political transition period of the 1990s, the former president Lee Teng Hui tried to incite a Taiwanese independence movement against China. Since then, education has focused extensively on local issues and Taiwanese identity such as the declaration of calls for the country to be known as Taiwan rather than the Republic of China, the shift of textbook content in elementary and secondary schools from China to Taiwan issues, and the increasing proportion of Taiwanization of the national civil service examination questions.

However, under the above multiple political, social, and cultural influences in education, less attention was drawn to some of the risks and conflicts encompassing with globalization and localization in education. In the case of the language policy in the education system of Taiwan, there has been increasing concern over the falling of Taiwanese primary students' achievements in the Chinese subject area and Mandarin literacy (*Central Daily News*, May 5, 2005). The number of teaching hours that used to be allocated to the Chinese curriculum has been reduced from one-half to one-third across primary and secondary school sectors. Also, localization within Taiwan is a unique and great predicament. Different from the rise of localization of third world countries around the globe, which are mostly against western oppression. Taiwan is confronting a cultural identity problem (Taiwanese versus Chinese) that could split the country into two. At present, it is most important to participate in process of globalization and internationalization, and at the same time reduce the cultural identity conflicts to its lowest possibility in education as well as in other societal aspects.

Gender Stereotyping

Gender stereotyping is nothing new in Taiwan where the culture and society has placed priority of males over females. In the past, women used to be regarded as second class. Families have traditionally regarded boys as inheritors of the family name and property. Many married couples would try every method to have a son. Families typically invested more resources on boys' education than on girls' education. Nevertheless, this traditional value system has been challenged and criticized by many women's rights advocates.

In the transformation from a traditional to a newly developed society, the Taiwanese government has passed several laws to promote gender equity. In 1997, the MOE in Taiwan initiated a Gender Equity Act which requires each primary and secondary school to conduct at least four hours of gender equity education each semester. It attempts to provide students with better opportunities for gender equity and to eliminate gender stereotyping against women (Tsai and Shavit, 2003).

In terms of educational achievement, the participation of women in Taiwan has increased at all levels of education over the past five decades. Specifically in higher education, Taiwan's female participation increased more than fourfold, from 11 percent in 1951 to 49 percent in 2005 (see Table 15.1).

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Table 15.1
Percentage of female educational participation in Taiwan

Type of Education	Year	Percent
Primary education	1950	39
	1971	48
	1994	48
	2005	48
Secondary education	1950	28
	1971	40
	1994	47
	2005	48
Higher education	1951	11
	1971	37
	1994	43
	2005	49

Source: Chou and Chang, 1998: 354.

Equity of Educational Opportunity

Although Boudon (1974) indicated that the high degree of educational development does not necessarily result in an equitable society after World War II, there is always a positive correlation between family background and educational opportunity. According to Blau and Duncan (1967), there is a positive correlation between family background and educational opportunity. In this regard, Taiwan has been considered one of the most equitable societies in terms of her income distribution and educational opportunity. Similar to other Western developed societies, educational opportunity in Taiwan has been correlated with family background and parental occupation.

The Taiwanese examination system from the 1950s to 2000 became one of the major avenues for upward mobility. Parents invested most of their savings in their children's educational activities such as going to cram schools or extra tutoring hours. According to Lin (2001), a major streaming exercise takes place between junior high and senior high school—one that divides students into different academic tracks based on their test results. Entry to different types of senior high schools will have a major impact on students' future careers (Lin, 2001).

In Taiwan, as in other East Asian societies, the higher the parental socioeconomic status, the higher the parental expectations for school success and the greater the family resources for supporting the education of their children (Zhang and Huang, 1997). Unlike in Western societies, where cultural capital seems to count more, in the Taiwanese context, family educational resources and going to cram school make a major difference in patterns of school success. According to Stevenson and Baker (1992), Japanese students will have a better opportunity in university if they receive more cram schooling and students from

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upper income backgrounds gain more from education. This is also the case in Taiwan (Hwang and Sun, 1996).

According to Hwang (1978), family background did not have a major impact on the joint-university entrance examination in Taiwan, which means the poor and rich enjoy the same educational opportunity to be admitted by the universities according to their examination results. However, scholars such as Chen (1988), Hwang (1990) and Wang (1983) argued that the design of the college entrance examination in Taiwan could be fair only because the educational processes from primary to secondary level have screened out students to a great extent so that those who are successful have very similar family backgrounds. Thus, it is argued that the university entrance examination cannot be a fair system when students' family backgrounds are actually taken into account.

Another area of concern is the educational opportunity for indigenous peoples. Aboriginal peoples comprise 2 percent of the population and their educational opportunities continue to lag behind those of the majority. For example, only 11.03 percent of the indigenous students gain access to higher education whereas 25.70 percent of their majority ethnic group counterparts do so (Council of Indigenous Peoples, Executive Yuan, 2002).

Furthermore, the introduction of market mechanism and deregulation into Taiwanese education reforms since the 1990s have reinforced this trend. As more and more reform programs such as different versions of textbooks and multiple channels of entrance examinations for high school and university have been introduced, the grading competition among schools and families has in turn accelerated. It is argued that Taiwan's old profile as one of the most equitable societies has been altered in the last 10 years. According to the 2001 National Annual Statistics (2002)Taiwanese income discrepancy between the top and bottom 10 percent was 161 times, in contrast to only 39 times one year ago and 19 times in 1991. When comparing the family annual income differences, the gap between the top 20 and bottom 20 percent was 6.39 times in 2003. The number 10 years ago was only 4.97 times, which was interpreted as lesser earnings of the lower-income families compared to 10 years ago. The increasing income inequity has made the dream of upward mobility within one generation less feasible.

AN OVERVIEW OF TAIWAN'S CONTEMPORARY EDUCATION SYSTEM

Background to the Present Education System

Education has been highly valued in Taiwan and a key item on the policy agenda of the ROC after the Kuomintang government's relocation from the mainland to Taiwan in 1949. The promulgation of educational legislation by the central government framed the foundation for the nation's ongoing educational development and achievement. For example, nine-year compulsory education, first initiated in 1968, is a milestone in contemporary Taiwanese education history for its significant impact on the development of the nation's human capital. All levels of education institutions have experienced dramatic growth in student

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and school numbers since the implementation of the Nine-year Compulsory Education program in the late 1960s. The Education Basic Law (the Law) came into force in 1999 to fully protect people's right to education, and entitled the Government to extend the period for compulsory education from the conventional nine years to twelve years. According to Yang (2001), the Law acts as the cornerstone of fundamental educational innovations in the millennium.

Educational development in Taiwan over the past five decades is briefly represented in the following statistics. The percentage of graduates admitted to the next level of education has increased steadily since 1968. According to the report on "2004 education in the Republic of China" (MOE, 2004a), the percentage of graduates admitted to the next level of education during school year (SY) 1965–1966 was 58.2 percent at the primary school level, 78.5 percent at the junior high school level, and 38.3 percent at the senior high school level (see Table 15.2). The percentage of primary graduates admitted to junior high schools entered a period of phenomenal growth in the beginning of the 1970s. The growth then became steady in the following years. By the year 2004, the average percentage of graduates admitted to the next level of education had reached 99.42 percent at the primary school level, 96.03 percent at the junior high school level, 80.05 percent at the senior high school level, and 67.17 percent at the senior vocational school level (see Table 15.2). Female graduates' enrollment rate has increased since the implementation of nine-year compulsory education. According to the statistics, in 1966, 69.38 percent of male primary school graduates attended junior high schools whereas only 47.42 percent of female students did so. The percentage of primary graduates admitted to junior high school education soon became 88.70 percent of male students and 72.28 percent of female students in 1971, and 99.45 percent of male students and 99.39 percent of female students in 2004.

Since the 1980s, the economy of Taiwan has grown rapidly and the political stability in Taiwan has provided the Government with a safe ground to pursue democratization, pluralism and liberalization in every sociocultural sphere (Yang, 2001). The present education system therefore reflects the social, political, and economic status of Taiwan, and has moved toward a more comprehensive system in the field of education.

In terms of its functions, the education system in Taiwan can be categorized into six major strands, including preschool education, nine-year compulsory education (including primary and junior high education), senior high and vocational schools, higher education, special education, and supplementary and continuing education (see Figure 15.1).

The present education structure supports a minimum period of 22 years of formal study, starting from preschool education to doctoral programs (see Figure 15.2). In particular, basic and intermediate education generally involves two years of preschool education, nine years of compulsory education, which integrates six years of primary education and three years of junior high education, and three years of senior high or senior vocational education. This section discusses the

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Table 15.2
Graduates Admitted to Next Level of Education (Unit: Percent)

	Elementary School			Junior High School			Senior High School			Vocational School		
Year	Average	M	F	Average	M	F	Average	M	F	Average	M	F
1950	31.78	35.93	24.91	51.15	56.07	39.38	39.76	—	—	—	—	—
1956	47.75	53.67	38.91	71.39	77.24	58.73	41.94	—	—	—	—	—
1961	53.79	63.02	42.39	78.60	85.87	66.87	44.65	—	—	—	—	—
1966	59.04	69.38	47.42	75.80	77.58	73.20	38.62	—	—	—	—	—
1971	80.85	88.70	72.28	69.62	68.78	70.84	43.47	35.29	56.64	—	—	—
1976	90.41	95.12	85.42	61.57	59.50	64.17	42.39	36.99	49.84	—	—	—
1981	96.77	98.29	95.16	68.11	66.29	70.12	45.39	39.56	52.72	—	—	—
1986	99.04	99.47	98.59	77.13	73.96	80.50	40.98	36.31	46.45	—	—	—
1991	99.28	99.34	99.22	86.09	83.08	89.19	51.94	55.24	48.43	13.68	14.47	13.04
1992	99.54	99.37	99.71	88.32	85.17	91.58	59.15	63.61	54.29	13.71	14.87	12.78
1993	99.53	99.27	99.80	87.78	84.94	90.75	61.32	64.47	58.29	18.03	18.44	17.71
1994	99.83	99.77	99.89	88.49	85.79	91.31	57.38	55.64	59.32	16.22	16.11	16.31
1995	99.75	99.77	99.72	89.17	86.73	91.71	56.58	53.01	60.51	17.84	17.13	18.43
1996	98.89	98.70	99.09	90.70	88.59	92.91	58.88	55.31	62.71	17.71	16.67	18.58
1997	99.18	99.19	99.18	92.02	90.15	93.98	61.95	60.30	63.73	23.32	22.53	23.99
1998	99.60	99.46	99.75	93.94	92.64	95.30	67.43	66.43	68.46	24.74	22.85	26.37
1999	99.89	99.88	99.91	94.73	94.69	94.79	66.64	68.43	64.83	30.49	27.56	33.18
2000	99.79	99.78	99.79	95.31	94.46	96.20	68.74	67.74	69.71	38.43	33.75	42.80
2001	99.15	99.34	98.98	95.97	94.91	97.10	70.73	69.68	71.78	41.82	37.18	46.27
2002	99.70	99.64	99.76	95.48	94.81	96.20	69.01	68.02	70.00	45.73	42.58	48.83
2003	99.44	99.44	99.44	95.74	94.74	96.82	74.85	73.48	76.20	62.63	58.93	66.33
2004	99.42	99.45	99.39	96.03	95.26	96.86	80.05	78.17	81.85	67.17	64.81	69.72

Source: MOE, 2005a, sheet 2.

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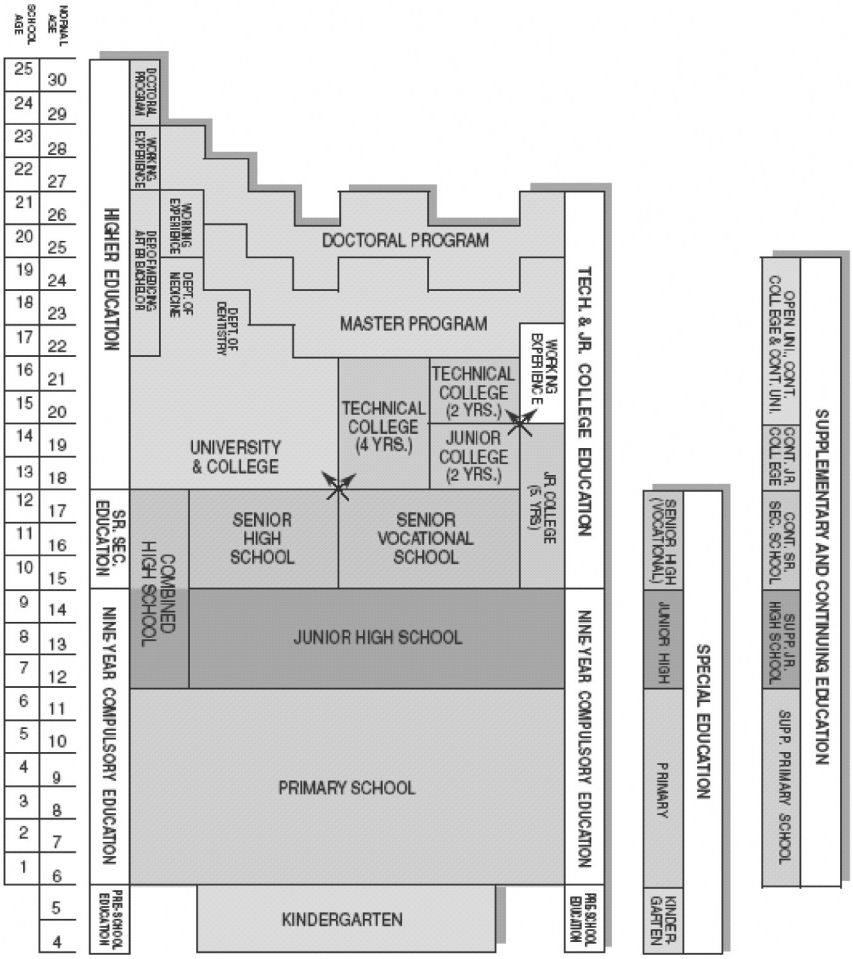
Figure 15.1
The education system in Taiwan



Source: MOE, 2004a: 18.

dominant education system, educational tracks, forms of admission, and related events according to levels, under the following themes: preschool education, nine-year compulsory education, senior high and vocational schools, teacher education, special education, higher education, teacher education, and supplementary and continuing education.

Preschool Education

In Taiwan, preschool education was uncommon in the 1950s. According to the Government Information Office, Republic of China (Taiwan), "Limited

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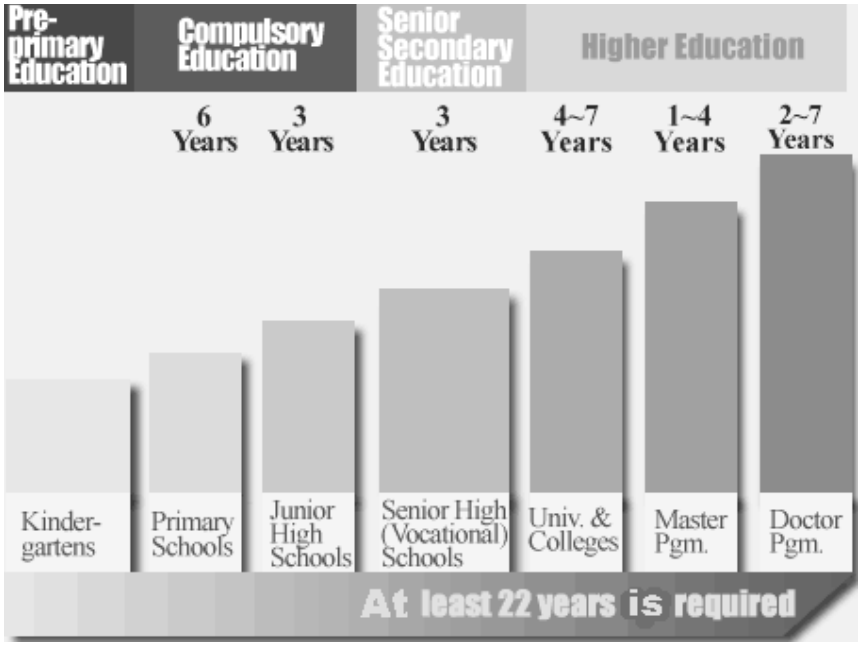
Figure 15.2
The Educational Structure



Source: MOE, 2004a: 18.

financial resources have kept two-year preschool education an optional part of the educational system" (GIO, 2004). It directly impacted on the enrollment rate of preschool education. The "Preschool Education Act" was promulgated in 1981 to set basic standards for preschools. The Ministry of Education (MOE) has also recognized the need for promoting preschool education and is working on affiliating preschools with existing elementary schools (GIO, 2004). However, the Act did not effectively transform the low coverage of preschool education. In 2001, the enrollment rate of 26.96 percent was still far below the Government's expected rate of 80 percent (GIO, 2004).

In SY 2004, preschool children accounted for only 10.66 per 1,000 population (see Table 15.3). Table 15.3 indicates that, during SY 2004, 10,417 classes in 3,306 kindergartens attracted 240,926 preschool students who were taught by 21,251 teachers. The average ratio of students to teachers was 11.34:1 (240,926:21,251) in 2004 which was a marked improvement over the student–teacher ratio of 40.50:1 in public kindergartens and 30.59:1 in private ones in 1976 (MOE, 2005c).

Private kindergartens comprise a large proportion of preschool education institutions, which are most independently operated, while most public ones

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Table 15.3
Summary of Education at All Levels: SY2004

	No of Schools	No of Teachers	No of Classes	No of Students	No of Graduates in 2003	No of Students Per 1.000 Population
Total	8,252	274,837	156,095	5,384,926	1,269,529	238.22
Kindergarten	3,306	21,251	10,417	240,926	—	10.66
Primary School	2,638	103,793	64,000	1,912,791	318,718	84.62
Jr. High School	720	48,845	26,573	957,285	313,549	42.35
Sr. High School	308	33,122	9,569	393,689	124,739	17.42
Sr. Vocational Sch.	164	15,771	8,275	325,996	114,041	14.42
Jr. College	16	1,770	6,210	289,025	110,208	12.79
Uni.& College	142	45,702	22,615	981,169	208,659	43.41
Special School	24	1,687	600	5,921	1,740	0.26
Supplementary Sch.	932	2,803	7,186	248,888	74,406	11.01
Open University	2	93	650	29,236	3,469	1.29

Source: MOE, 2004a: 56.

are affiliated with public primary schools. In SY 2004, 240,926 children attended 3,306 registered kindergartens, among which 1,358 were public schools and 1,948 were private (MOE, 2004b). Private kindergartens were 1.43 times as many as public ones. The large number of private preschool institutions charge higher tuition fees than public ones (up to 10–40 times), and this therefore impose a heavy financial burden on the parents. Specifically, the Government Information Office, Taiwan, points out the following phenomenon that

> Private kindergartens in metropolitan areas usually have fewer problems recruiting students, because most parents want their children to get a head start in the highly competitive educational system. Outside the larger cities, however, private preschool fees are often a burden for average-income families. (GIO 2004, para 10)

In addition, many private preschools offer accelerated courses in various subject areas to meet public demands for academic achievement, often encompassing science, art, physical education and mathematics (Wikipedia, 2005). There has also been a huge growth in the number of English immersion or bilingual preschools to meet parents' expectations of an English immersion learning environment for the younger generation. In Chinese societies such as Taiwan, parents have high expectations on children's intellectual growth and capacity building (Hwang, 2004; Stevenson, 1996, cited in Smith, 1997). However, heated debate on whether children in Taiwan should start foreign language learning in early childhood with concerns that this may harm students' abilities in learning their mother tongue (Wikipedia, 2005). Despite these debates, the "English-learning fever"

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(Chen, 2004: 8) phenomenon continues to boost at every single level of education in Taiwan.

Nine-Year Compulsory Education

After preschool education, students of six years of age are admitted to elementary schools under the nationwide compulsory education policy. Two years after the implementation of nine-year compulsory education, the junior high vocational program was abolished in 1970. Some of the vocational courses were merged into the junior high curriculum. The implementation of compulsory education does not simply mean extending the length of compulsory education from six years to nine years, but allowing students to acquire more comprehensive education than in the past (Liu, 1981). The MOE also set curriculum standards for elementary and junior high school education in order to ensure effective teaching. The "National Education Act 1979" further stipulates that all school-age children between six and fifteen years old must attend elementary schools and junior high schools. Children with special educational needs, students who spend time in supplementary education, and a small number of students in experimental schools are exempt from this rule (GIO, 2004).

In 1992, the MOE implemented the trial Prolonged National Education Based upon Vocational Education Program that combined junior high school and senior vocational school curricula, and allowed junior high students who do not seek academic career paths to receive relevant occupational training. The program became an extension of the compulsory education system in 1994, and was implemented nationwide in 1996.

Textbooks have traditionally been controlled and published by the central government and served as tools to convey political and social ideologies. Along with the political reform and social protest movements in the 1970s and 1980s, issues of textbooks became a burgeoning topic of debate. Traditional textbooks have been criticized for reinforcing the dominant cultures of the governing party without considering the specific perspectives and voices of different gender, cultural, and ethnic groups. A new textbook publication system was introduced in 1996 to decentralize the textbook market, parallel to the trend for diversification and liberalization in Taiwanese society and education. The new textbook system entitles private companies to publish textbooks and teaching materials after being reviewed, screened and approved by the National Institute for Compilation and Translation (NICT) under the Ministry of Education (MOE). This approach implies that the MOE "is still responsible for setting the standards for the curriculum and overseeing educational quality control" (Pan and Yu, 1999: 80). Since September 2001, schools in Taiwan now implement the "nine-year spiral curriculum" with continuity of courses from year to year, and without sharp divisions between elementary and junior high school education (Li, 2002). This curricular reform is congruent with many developed countries' reform processes of integrating the curricula for compulsory education. The new curriculum

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incorporates seven main fields of study, and ten major basic skills. The seven study fields are:

1. Language: Languages of Taiwan (Mandarin, Hokkien, Hakka, Aboriginal languages) and English;
2. Health and physical education: Health, physical education, and sex education;
3. Social studies: History, geography, civics, economics, law, and human rights;
4. Arts: Music, visual arts, and performing arts;
5. Mathematics;
6. Science: Biology, physics, chemistry, earth science, environmental science, and life and information sciences; and
7. General activities: Computers, club activities, scouting, outdoor activities, and home economics. (Li, 2002, para 7)

The ten basic skills include:

1. Understand self, and develop one's potential;
2. Appreciation, expression, and creation;
3. Life and career planning; lifelong learning;
4. Expression, communication, and sharing;
5. Respect, compassion, and group cooperation;
6. Cultural learning, international understanding;
7. Planning, organization, and implementation;
8. Use of science, technology, and information;
9. Self-directed exploration and research; and
10. Independent thought and problem solving. (Li, 2002, para 15)

The size of the school and the class is one of the key factors for student learning outcome, and greatly influences the teacher's workload, performance, and interaction with students (Pan and Yu, 1999). Reducing the size of schools and classes and making it manageable has become part of the educational reform agenda. In addition, Table 15.3 indicates that, in SY 2004, 1,912,791 students attended 64,000 classes in 2,638 primary schools in Taiwan among which 318,718 students graduated. The ratio of students to teachers was 18.42:1 (1,912,791:103,793). At the junior high school level, 393,689 students attended 26,573 classes in 720 schools in SY 2004, among which 313,549 students were students who graduated that year. The student–teacher ratio was 19.60:1 (957,285:48,845) that is lower when compared with the ratio of students to teachers, 33.79:1, in 1976. This improvement in student–teacher ratio shows the Government's commitment in reducing the class size, and promoting the quality of compulsory education.

Senior High and Vocational Schools

Upon the completion of compulsory education, junior high school graduates who aim to acquire further education attend senior high and vocational schools. Public or private senior high and vocational schools institutions are categorized

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into six types: normal senior high, senior vocational, comprehensive, single discipline, and experimental and combined high schools. The most common types of upper secondary institutions are normal and vocational ones. Many junior high graduates prefer senior high schools over vocational ones. Some junior high graduates choose to go into vocational schools which place a heavier emphasis on practical and vocational skills than their counterparts. Some attend five-year junior colleges that cover their high school years and contain the Practical Technical Program. In addition, Pan and Yu (1999) note that not only have new high schools been established, but also a number of junior high schools have been integrated with senior high schools and become six-year full secondary schools. This could have contributed to the difficulty in allocating land for schools. Comprehensive high schools have also been established to meet the demand for more high schools.

Furthermore, the development of senior high and vocational schools has reflected a shift in the need for manpower in Taiwan. Pan and Yu (1999) acknowledge that

> In the 1970s, many 2-year junior colleges or 5-year technical ones were established to meet the urgent need for manpower. With the transformation of the economic structure from labor-intensive industries to a capital and technology-intensive ones, public 4-year technical institutes were set up to meet the higher-level need for manpower. (Pan and Yu, 1999: 74)

The demand for skilled manpower has further impacted on the types of upper secondary institutions that were established. The ratio of vocational school students to high school students was set to reach 7:3 by 1981. As Tien (1996) notes, "Under this policy, vocational education became the mainstream of middle education in terms of quantity" (ibid., para 8). From 1971 to 1982, "the number of students admitted into senior high schools gradually declined, while the number of students entering senior vocational schools increased to meet the growing demand for skilled workers in the rapidly growing economy" (GIO, 2004b, para 33). As the demand for high-quality professionals increased, educational policies were reversed by expanding senior high schools. The expansion of senior high schools has outnumbered the students who are admitted to vocational schools. Here the term "senior high school" refers to normal senior high schools and other types of high schools, excluding vocational schools, as mentioned earlier in this section. In particular, the expansion of senior high schools involves integrating the vocational curriculum with the mainstream curricula. This has attracted a large number of students who in the past have to attend traditional vocational schools. Thus, vocational schools have faced difficulties in recruiting students.

Most junior high graduates used to sit for the Joint Public Senior High School (JPSHS) Entrance Examination before they were admitted to senior high schools. The JPSHS was replaced by the Basic Competency Test (the Test) in SY 2001. The Test contents are confined to the subject areas as defined by the nine-year spiral curriculum. Under the Test, candidates can be granted admission

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"by applying, by meeting requirements and passing the entrance examination of individual schools for special subjects (admission through selection), by being registered and then assigned, or by recommendation" (MOE, 2004a: 20).

In terms of numbers, combining senior high schools, senior vocational schools, and junior colleges, 1,008,710 students attended 24,054 classes in 488 schools in SY 2004 among which were 342,988 students who graduated that year (see Table 15.3). Curriculum guidelines have been set up for senior high and senior vocational schools in the following specialized areas: agriculture, industry, business, maritime studies, marine products, medicine, nursing, home economics, drama, and art. Comprehensive high schools also deliver some proportion of vocational programs in these curricular areas. Textbooks for the senior high level must be reviewed and approved by the NICT according to present curriculum standards.

Special Education

Special education provides students with special needs alternative channels for schooling, and involves at least six years in preschools and together with primary schools, three years in junior high schools, and three years in senior high and senior vocational schools. Specifically, the MOE (2004a: 17) regulates that "Only designated schools are allowed to admit students who are mentally and physically challenged . . . special classes are offered to regular education institutions, including primary, junior, and senior high schools." In other words, some primary and secondary schools integrate special classes on their campuses, whereas there are independent special schools that provide special training for students with special needs. Universities and colleges also allocate resource classes for students who identify as having impairment. In SY 2004, 5,921 students with special needs attended 600 classes in 24 special schools among which were 1,740 students who graduated that year (see Table 15.3).

Higher Education

According to Pan and Yu (1999: 75), "Post-secondary education includes 3 years of junior college or, usually, 4 years of college/university with the exception of departments such as dental and medical science, which take 6 and 7 years respectively). Two-year junior colleges, two-year technical colleges, and four-year technical colleges are designed for graduates to continue with advanced vocational programs. Those who wish to pursue academic career paths will choose university education. Channels for admission to colleges or universities now include "allocation based on test scores of entrance examinations and entry based on selection from personal applications and recommendations by high schools" (MOE, 2004a: 21). For most high school students, the main goal of high school education is to score highly on the MPPCS at the end of their third year in order to attend universities.

The higher education system in Taiwan entered a stage of dramatic growth after the lifting of martial law in 1987. The revision to the University Law in 1994 further changed the higher education system dominated traditionally by

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the Ministry of Education. The Law also "reduced the power of the Ministry of Education over higher education institutions, and campus operations have become more flexible" (Tsai, 1996, para 2) in appointing presidents, charging tuition fees, offering courses, and recruiting students.

In addition, there has been long-term growth in the number of higher education institutions over the decades. In SY 1987, there were only 107 higher education institutions in Taiwan. The number of higher education institutions has increased dramatically from seven in 1950 to 159 in 2005, among which are 75 universities, 70 colleges, and 14 junior colleges (MOE, 2005d). However, there has been gradual decline in junior college numbers from 76 schools in SY 1976 to 14 in SY 2004 (MOE, 2005b). Vocational school graduates may also participate in the MPPCS before being admitted to four-year universities and colleges. Students of vocational schools usually proceed to four year technical colleges or two-year junior colleges afterward.

The ratio of public to private institutions is 1:1.94 (54:105) (MOE, 2005d). This number indicates that the expansion of higher education in Taiwan can be accounted for mainly by an increasing number of private institutions. However, public higher education institutions are viewed as being more prestigious than private ones. Specifically, the expansion was "accommodated mainly by creating new institutions and by upgrading existing ones, although other strategies, such as splitting, merging, and increasing the size of the existing institutions, were also used in historical sequences" (Tsai and Shavit, 2003: 3). There has also been constant growth in the net enrollment rate of higher education among the 18–21 age group, particularly among female students. According to the MOE,

> The net enrollment rate rose from 10.0 percent in 1976 to 38.7 percent in 2000, and the increase was more profound for females than for males. To be more precise, in 1976 the net enrollment rate of males aged 18–21 (11.2 percent) was higher than that of females (8.7 percent), whereas the opposite was true after the mid-1980s. In 2000, the net enrollment rate for women aged 18–21 was 42.1 percent, higher than that for men (35.5 percent) of the same age. (cited in Tsai and Shavit, 2003: 2)

Traditionally, upper secondary graduates used to sit for the traditional "Joint University Entrance Examination" (JUEE) before being admitted to universities and colleges prior to SY 2002. Presently, admission channels to higher education institutions have become more flexible and multidimensional than in the past. Starting SY 2002, JUEE was replaced by a new system, the Multiroute Promotion Program for College-bound Seniors (MPPCS). The new system comprises application, selection by recommendation, or a new version of the JUEE.

At the higher education level, individual students' academic progression or program completion time varies greatly depending upon their personal, academic, or vocational needs and goals. Higher education in Taiwan usually comprises four to seven years of college or university programs, one to four years of master's programs, and two to seven years of doctoral programs that are either run by public or private institutions. Specifically, applicants to master's and

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doctoral programs must meet specific admission criteria and pass entrance examinations, usually including a written examination and/or an interview, that are administered by individual institutions. A master's or doctoral degree will be conferred by the university only when the student has fully met his or her program requirements, and passed a comprehensive examination. Furthermore, doctoral candidates are obliged to undergo the qualifying evaluation process. Teaching materials for higher educational institutions are either compiled by the MOE or the NICT regulations. However, lecturers have the autonomy to choose teaching materials in specialized fields.

Teacher Education

Normal universities and teachers' colleges traditionally deliver teacher education in Taiwan. They offer mostly four-year teacher education and training programs for student teachers of secondary schools, elementary schools, and kindergartens. Normal universities primarily offer secondary education programs while teachers' colleges primarily prepare teachers for primary schools and kindergartens (MOE, 2004a: 17). In the past two decades, there has been rapid expansion across various levels of education in Taiwan. The demand for quality teacher development is paramount. Under the umbrella of pluralism, the new Teacher Education Act (the Act) was promulgated in 1994 and revised in July 2002 to meet the needs of a more diversified society. The Act entitles qualified higher education institutions to deliver teacher education programs, thus altering the previous monopolistic policy on teacher education (Yang, et al., 2001; Yang, 2003).

The Teacher Education Council, organized by the MOE, accredit and authorize qualified teacher education programs. Colleges and universities that include the department or college of education, and meet relevant requirements are now entitled to deliver teacher education and training programs in a minimum two-year period. One-year teacher training is available for college and university graduates, whose expertise is other than education and who aim to seek a career path in teaching. In general, student teachers pay the tuition fees of their teacher education programs. However, full or partial financial assistance are available for some students.

The Act plays a crucial role in the development of teacher education and induction in Taiwan, and provides guidelines for formulating regulations and support systems leading to full registration (Ho, 2003). "The Regulations of Induction and Registration for Probationary Teachers in Secondary, Elementary Schools and Kindergartens 1995" entitles the teacher education institutions to select collaboration schools based on their effectiveness and sufficient numbers of qualified teachers who can guide probationary teachers.

The Regulations empower teacher education institutions to guide these schools, and to sign induction collaboration contracts with schools to provide induction programs for probationary teachers. The Regulations also regulate probationary teachers' professional development, the amount of time involved in

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probationary teaching, participation in educational activities required by schools, and assessments based on the following criteria: morals and integrity; attitudes and spirituality; interpersonal and communication skills; the capability and knowledge of teaching and guiding students; and the performance in professional development programs. However, leadership as a key dimension of teacher qualities in the era of educational reforms (e.g., Silva et al., 2000; Robertson and Strachan, 2001: 320–334; Harris, 2003) is absent in the professional teaching dimensions for teachers of Taiwan. This has directly impacted on teachers' capacity to respond to enormous demands on change and innovations in Taiwanese schools.

In addition, the duration and structure of probationary teaching for student teachers to become fully certified is another area of debate. The 1994 Act mandated that a student teacher who has graduated from the required teacher education program in a teacher education institution has to complete an additional one-year probationary period in order to obtain a teaching qualification. Under the one-year probationary structure, first-year teachers are no longer students, are attached to mentor teachers on the school site, and are responsible for some teaching and administrative duties in schools in negotiation with their mentors.

Nevertheless, most studies on the overall effectiveness of the induction programs for probationary teachers after the implementation of the Act have found numerous problems, including the absence of supportive networks, the shortfall of financial support for probationary teachers, the lack of clarity about their positions or work responsibilities, and the need for professional development programs to provide mentoring skills for mentor teachers (e.g., Lee, 2000; Lin, 2000). Under the Act, Taiwanese probationary teacher is granted NT$8,000 (equivalent to US$267) per month. In Ho's (2003) study on three New Zealand and three Taiwanese beginning secondary teachers, all the Taiwanese probationary teachers regarded the salary or subsidy level as too low.

Yuang-Ching and Yi-Ping (pseudonyms), two Taiwanese participants, further indicated that many probationary teachers have to take on additional teaching duties after school in order to survive. Ho concluded that the inadequate subsidy has had a negative impact on the probationary teachers' perceptions of their teacher status and their own worth, on other teachers' perceptions of probationary teachers, and on the degree of distrust between probationary teachers and their schools. Criticism toward the probationary teaching structure under the Act led to further amendments to the Act in July 2002.

Under the 2002 Act, the probationary period has been reduced to a half-year period. A teaching assessment at the end of the probationary teaching is additional to the probationary teaching. In other words, student teachers will not become fully registered until they pass the teaching assessment after the half-year probationary teaching period. The new teacher certification system involves two steps. The first stage reviews student teachers' performance over their teacher education programs in common courses, disciplinary courses, and education specialization courses to verify that they have met the standards. After the first

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stage, student teachers are located in a school to fulfil the half-year internship as a requirement of becoming fully certified. Teacher education institutions and schools collaborate to provide support and mentoring services for student teachers. The second step evaluates student teachers' in-school performance to determine if they can be granted teacher certificates. Qualification requirements for teachers at special or supplementary schools are the same as those for teachers at regular schools. The previous one-year probationary structure still applied to student teachers who had enrolled in their teacher education programs prior to the amendments to the Act in 2002.

In other words, graduates of SY 2005 are entitled to choose their beginning teaching period upon graduation between the old one-year probationary system, and the new half-year probationary structure. It is noteworthy that graduates, who are under the half-year probationary teaching period, need to pay tuition fees. This implies that those teacher candidates retain their role as students, and therefore have limited responsibilities. There has been a lack of empirical studies on the new teacher certification structure in Taiwan.

Supplementary and Continuing Education

Apart from the above education pathways, social education is available to all citizens of Taiwan, including "supplementary and continuing education, education on-air, adult and lifelong learning, national language education, citizen's education, art education, library education, museum education, audio-visual education, family education and guidance in spiritual renewal" (MOE, 2004a: 50). Among these social education programs, supplementary and continuing education programs are more formal than others, and are "designed to supplement regular education, raise education attainment, teach practical skills, and upgrade productivity" (MOE, 2004a: 50). Social education provides out-of-school citizens as well as working youths in Taiwan with an alternative way to acquire basic education, advanced studies, and/or short-term supplementary education. The MOE (2004a) statistics shows that, during SY 2003 to 2004, 1.101 percent of citizens in Taiwan attended 7,186 classes in 932 schools that offers supplementary school programs whereas 650 classes in two open universities attracted 0.129 percent of Taiwanese citizens (see Table 15.3). The development of supplementary and continuing education in Taiwan is part of a growing momentum leading toward a lifelong learning society.

A SCHOOL DAY

Going to secondary schools is one of the most trying periods in a Taiwanese student's life. The reason is though Taiwan has a free nine-year compulsory education, students need to sit for qualifying examinations for admission to senior high schools or vocational high schools, and universities or colleges if they want to continue to the tertiary level. That is the source of the examination pressure within each school.

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Unlike many Western counterparts who attend school from 9 A.M. to 3 P.M., Taiwanese secondary students have a much longer school day from 7:30 A.M. to 5:30 P.M. depending on different schools. In most junior high schools, prior to the first period of the class, there is always a period of time for campus cleaning up, and morning-self-study in the homeroom, followed by a morning assembly which altogether lasts from 45 minutes to one hour. Campus cleaning up and morning assemblies are not mandatory for all. Students rotate every other week depending on what year of study the students are in. Senior students busy preparing for the Basic Competency Test are relieved from most of the campus cleaning and assembly duties. The school assembly takes place where students gather—in the assembly hall or the school field (by rotation among different classes) for civic education. Flag-raising ceremonies, principal's talks for daily rules and other routine assignments will be announced at that time. With respect to the morning homeroom self-study time, this period of time allows students to engage in self-reviewing lessons or take quizzes that are required by their teachers.

In junior high schools, each class lasts 45 minutes. There is a lunch break followed by napping time. Students may choose to remain seated and read or study during that time. The philosophy behind this naptime is not only a social tradition in Taiwan but also to refresh students' mind during hot weather. In the afternoon, most schools start from 1:20 till 4:10 P.M. The so-called main-subject courses such as Chinese literature, science, English, and mathematics are arranged usually in the morning session. Then, classes such as civic education, history, geography, integrated activities, music, health and physical education are offered in the later hours of the day. It is believed that the main subjects require clearer minds for better concentration and more effective learning.

Another tidy-up period for the class and the final campus cleaning time lasts about 25 minutes during the afternoon session. Afterwards classes start at 3:25 again till 4:10 P.M. by which time most schools close except for some classes. For example, the senior-year students will remain in the homeroom for extra tutorials in subject areas of English, mathematics, Chinese, science, and so on. Then the seventh period ends around 4:10 P.M. Many schools ask students to attend an extra period for supplemental instruction or quizzes. Students need to pay for this extra hour of instruction. Students can receive extra lecturing for their main subject areas that will, hopefully, enhance their academic performance.

Praise for the students is less common and good behavior is expected from them by the Taiwanese parents (Hwang, 2004). When asked, "What is the most important factor in determining a child's performance in the school?," parents in Taiwan usually respond "effort" rather than "innate ability" whereas American parents mostly cite the latter (Stevenson, 1996, cited in Smith, 1997). It is also the home environment that supports Taiwanese children for academic performance rather than extra curricular activities. In modern Taiwanese society, many young parents are also keen on cultural activities. In addition to their school tasks, many of the students also take language and music classes after school.

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Nevertheless, at higher levels of schooling the students are less likely to continue these lessons because of examination pressure.

In the era of education reform after 1994, many parents have become uneasy because of unfamiliarity with many new education initiatives. Consequently, parents pay for extra classes in cram schools or tutoring lessons for their children even after the abolition of junior high school and university entrance examinations. Ironically, the slogan that education reform will relieve children from carrying overloaded school bags has not prevented more and more textbooks and homework for students.

Smith (1997) described the competitive setting of the modern Taiwanese secondary schools as "Academic Darwinism" which implies that only the most able and capable students will move on to higher levels of schooling. In Taiwan, secondary education emphasizes individual competitiveness which requires students to compete aggressively to survive to the next education level.

Researchers like Harold W. Stevenson and his colleagues (the Stevenson group) often mentioned that the academic performances of American children are below their counterparts at the same age level in Japan, Korea, and Taiwan (Stevenson, 1996, cited in Smith, 1997). Unlike many American public schools which are very much concerned with students' security, Taiwanese put extra burden on school teachers and students for academic achievement. According to the Stevenson group, American schools are less effective in classroom management and instruction than those in Taiwan. The average school day is much longer in Taiwan, around 200 days versus Americans' 180 calendar days. School time is also much better used in Taiwan schools. Taiwanese students use a lot more of their school day in academically oriented activities. In addition, discipline problems are not as serious as American schools. In addition, parents play a crucial role in children's attitude toward schooling. Taiwanese mothers are much more likely to be involved in their children's school activities and PTA (parent-teacher association).

The following class schedule is from a southern Taiwanese public junior high school that opens from 7:10 A.M. till 6 P.M. Monday through Friday (see Table 15.4). In the school, although most classes start at 8:10 A.M., students are required to arrive on campus by 7:30 A.M. During each morning, students spend 10 minutes on campus cleaning. Between 7:20 A.M. and 7:50 A.M. students usually stay in their homeroom for self-study in their seats. Teachers need not be present at this time but most are. Between 7:50 A.M. and 8:10 A.M., school assembly takes place in the school field or hall.

After the morning assembly, all classes begin at 8:10 A.M., and go on till 8:55 A.M. Then second period starts from 9:10 A.M. and goes on till 9:55 A.M., the third period lasts from 10:10 A.M. to 10:45 A.M. and then the fourth period from 11:05 A.M. to 11:45 A.M. Lunch time lasts from 11:50 A.M. to 12:30 P.M. After that, students are required to take a nap from 12:30 P.M. to 1:10 P.M.. Some student groups engage in other activities such as daily alert or campus patrolling. The afternoon section, which starts from 1:20 P.M., lasts all the way till 4 P.M.

Table 15.4
Class Schedule

Yen-Ping Year 7 Class 1 Schedule						
Period	Class period	Mon	Tue	Wed	Thu	Fri
7:10–7:20	Clean campus					
7:20–7:50	Morning homeroom					
7:50~8:10	Morning meeting					
1	8:10–8:55	Chinese	Science	English	Geography	Chinese
2	9:10–9:55	Chinese	Chinese	Science	Chinese	Art Performance
3	10:10–10:55	Science	English	Mathematics	English	Mathematics
4	11:05–11:50	Mathematics	Health and P.E.	Integrated and Activities	Mathematics	Art
11:50–12:30	Lunch break					
12:30~13:10	Nap time					
5	13:20–14:05	School meeting	Civics	Chinese reading	History	English conversation
6	14:15–15:00	Class meeting	Integrated and activities	Music	English composition	Science
15:00–15:25	Clean campus					
7	15:25–16:10	Clubs	Integrated and activities	Health and P.E.	English composition	Health and P.E.
8	16:20–17:05	English	Mathematics	Chinese	Science	English reading

Source: Yen Ping Junior high school, 2003, para 5.

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Cram School

Most junior high students leave school after 5 P.M. Some of them go home for dinner and others continue their study at "cram schools." These cram schools are examination-oriented private institutes which focus on drills and practices. Some students also choose English conversation lessons or science laboratory experiment classes. Parents have to pay approximately NT$2,640 (US$80) per subject per month. If one student takes three subjects at the cram school, the fees may run up to NT$7,920 (US$240) per month. This is a great burden for an average family in Taiwan.

A 15-year-old girl, Amy (see the attached photo on page 40), who just graduated from junior high school, mentioned in an interview that she used to fill in numerous examination practice sheets although these were not necessarily relevant to their daily learning. Amy accepted this reality as a natural course of learning at her secondary school.

On the other hand, there is not much homework at Amy's former school. Instead, the daily examinations replace homework. It is more likely that most students in her school are asked to prepare for the quizzes on the next day than do their homework.

Every new entrant to junior high school is required to take an IQ test and mathematics ability assessment. These test results serve as a foundation for normal distribution of class grouping. In the past decades, the MOE has been enforcing restrictions on ability-grouping in secondary schools in order to eliminate any discrimination against different ability groups. Presently all junior secondary schools need to comply with this policy. However, the reality is that some schools continue to engage in ability-grouping practices. For example, teachers of the subject areas may divide students into different ability groups for instruction and learning. It depends very much on individual teacher autonomy in the classroom. If a teacher is not competent enough, this streaming will result in unequal resource allocation among different ability-groups. Most teachers will teach a class in successive years from year 7 to year 9. Teachers from compulsory levels enjoy tax-free salary and social respect.

Amy's former school is located in downtown Taipei. Amy considered herself lucky enough not to spend too much time playing video games or watching TV due to her busy daily school schedule. She wears glasses like most of her classmates. She started developing myopia around grade 5. She does not enjoy leisure reading. She prefers chatting with her classmates on campus, playing around with friends from whom she gains recognition and inspiration for learning. Her father also provides her with pocket money though she is not keen to spend money except for lunch, bus fare, and so on. She mentioned once: "I don't need much money to spend because I'm always at school or in the cram school and my parents will provide anything I need. So I don't really spend money on my own." Even her mobile phone and the internet fee are paid by her parents. She is quite obedient to her parents. She has a mobile phone for the sake of communication with her parents, especially her father. Her life is very simple, mostly surrounded

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by school, classmates, parents, brothers, and sisters. Unlike her classmates who spend a lot of time on MSN chat with friends, Amy only checks her e-mail once in a while and completes her homework with the help of Internet searches. In her mind, her best friends are those who can study hard and get high grades, and also know how to have a good time.

When asked "What if you were a junior high student again?" Amy replied, "I would adjust my learning habits and make the best use of my time rather than idling." Amy is determined to specialize in tourism or hotel management and this is partly a result of her mediocre grades in the Basic Competency Test. Amy laughed when being asked about her future plans. She said, "I'm very fond of playing. So the best way for me is to earn a living in the future by joining the recreation business, such as working as a staff in the hotel, in the airline company or in a restaurant."

Regarding her daily schedule, she usually goes to bed around 11 P.M. and gets up around 6:30 A.M. She plays video games once in a while for relaxation as well as watches TV. In so doing, she does not have special interests except for killing time or joining her family activities. Amy seldom engages herself in sporting activities (typical to most Taiwanese students) although she takes two physical education classes (equals 90 minutes per week) for playing basketball, ping-pong, and other sporting activities on campus.

Survey Results on Secondary Student, Parent and School

According to the "Taiwan Education Panel Survey (TEPS)," junior high students spend more time with their parents every day than do senior high or college students. In addition, junior high students spend more time with their mothers than fathers. Nearly 58 percent reported spending four hours per day with their mother compared with 36 percent with their father. Compared with the groups which spend less than one hour with their parents, the more time they spend with parents, the better parent-child relationships they have (TEPS, 2005a).

Another TEPS indicates that 84.4 percent of junior high school students regard schools as a happy place, especially when the classroom climate is positive, and teachers are dedicated to teaching. In other studies, peer groups also have an influential impact on secondary students' socialization. There is a positive relationship between peer atmosphere and their positive feelings about the school. According to the TEPS, the more a student studies with his or her classmates, the more fulfilled the student feels (TEPS, 2005b).

If the teacher has an encouraging and positive attitude toward students, and assigns students more learning tasks or homework, the student will feel more positive toward teachers. If teachers are indifferent, students will regard schools as an unhappy place. After all, students are concerned about their learning atmosphere in the school. The more learning activities in the school, the more satisfied the students will experience. Campus security is another source of students' happiness in the school. A supportive and secure campus environment will provide students with a better place to study in Taiwan (TEPS, 2005b).

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Picture of Amy (Yi-Shan) Chen at the age of 15 wen she was in her 9th grade.
Source: Mr Hsun-hui Chen.

The experience of Amy does not necessarily represent the rest of secondary student population in Taiwan. However, it indicates how school practices, and competition within conventional Taiwanese schools reflect reform dilemmas.

DISCUSSIONS AND CONCLUSION

Taiwan is a Confucian society that highly values education. The modern education system also retains vestiges of Japanese colonial influence. The present Taiwanese education system supports a period of 16 years of formal education. In particular, a nine-year compulsory education introduced in 1968 emphasizes individual students' competitiveness in order to proceed to the next higher level in the education system. The education system has undergone a number of controversial reform programs and policy practices, and it proceeds to the goal of becoming more diversified, democratised, pluralized, and liberalized.

The education system has been successful in terms of key indicators such as student enrollment rates, percentages of graduates admitted to next levels of education, and students' high scores in international mathematics and science tests, such as International Mathematical Olympia (IMO), Programme for International Student Assessment (PISA), American Invitational Mathematics Examination (AIME), and Trends in International Mathematics and Science Study (TIMSS).

However, achievement in quantitative terms is insufficient to determine the overall effectiveness of Taiwan education. Education in Taiwan has been criticized for "placing excessive pressure on students and eschewing creativity in favor of rote memorization" (Wikipedia, 2005, para 1). Furthermore, Pan and Yu pointed out that "the normal development of individuals has been distorted, and schools have become preparation institutions for high schools and colleges" (Pan and Yu, 1999). In order to address these issues, people in Taiwan therefore began

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to engage in civic organizations to facilitate educational reform activities, so did the academics, and the Ministry of Education. Change and transformation has become the main characteristics of educational development in Taiwan.

Since late 1990s, educational reform in Taiwan encompasses a mixture of ideas and multidimensional demands of a robust education system. Since the 1980s, an international trend of free-market economy and deregulation has emerged to change the education environment around the world. The education systems in New Zealand, Australia, United Kingdom, United States, Argentina, Mexico, and other Latin American countries, are identified as experiencing a similar reform approach under the influence of "neo-liberalism" ideology (Chou, 2005). As the literature suggests, reform activities in the field of education have mainly dealt with "deregulation, equality of educational opportunity, opening teacher education programs, reformation of the school system, reducing school size and class size, multiple ways of recruiting students, opening the textbook market" (Pan and Yu, 1999: 77–80). Other education reform areas include curriculum reforms for economic globalization, and emphasis on information and communication technology and English as transnational skills (Law, 2004: 507–11). Reforms are also struggling to strike a balance between internationalization and localization (Yang, 2001).

In 2002, the Ministry of Education implemented the project entitled "e-Generation Human Capacity-Building," which is part of a comprehensive six-year national development plan entitled "Embracing challenges of 2008." This reform effort is consistent with the above educational reform movements toward a dynamic and socially responsive education system. In particular, it aims to foster creativity and the capacity of the young citizens of Taiwan to be internationally competitive in the knowledge-based economy. The highlights of the project include fostering an international environment, enhancing the ability to master foreign languages, promoting e-learning and education in culture, arts, sports and civility, and advocating lifelong learning (MOE, 2002b). As such, educational reforms in Taiwan have embraced many reform ideas, theories, actions, experiments, and influences throughout the years.

Chou (2003) categorizes many controversial issues regarding Taiwanese primary and secondary educational reforms launched by the government during 1987–2003 into the following four stages. First, the "break-out stage" (1987–1988) incorporated various external and internal environmental factors resulting in a series of nationwide education changes.

Second, the "developing stage" (1989–1993) began when legislators passed many education bills and acts to ensure that the reform policies were implemented throughout the country.

Third, the "maturing stage" (1994–1998) involved the formation of the Committee on Education Reform (1996–1998) under the Executive Yuan that drew many representatives from all walks of life to design the themes and frameworks of educational reforms. The appointment of the Nobel Prize winner in Chemistry, Dr. Yuan-Tseh Lee, from the University of California at Berkeley as

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the head of the Committee was remarkable at this stage. The framework for educational reform activities was proposed in 1996 involved the following agenda (see Figure 15.3). The agenda covered parents' right of choice, protection of learners' right, autonomy of teaching profession, educational deregulation, internationalization, science and technology-orientation, pluralism, democratization, humanization, educational modernization, building lifelong learning society, upgrading educational quality, open grading channels, and a policy of "no child left behind."

In 1998, the Twelve Education Reform Mandates, which were allocated a special budget of NT$150,000,000,000 (equivalent to US$5 billion) to be accomplished in five years, were approved by the Executive Yuan and Legislative Yuan. According to Yang (2001), these revolutionary mandates were key to "leaving greater leverage for unprecedented education changes in Taiwan" (Yang, 2001: 8) in the following 12 areas. They are:

1. Revamping national education projects, K-12.
2. Fostering preschool and kindergarten education programs.
3. Renovating teacher education and in-service training programs.
4. Promoting impeccable diversified vocational education.
5. Pursuing excellence in higher education and its development.
6. Advocating lifelong learning projects.
7. Strengthening educational programs designed for the handicapped.
8. Invigorating educational programs for the native Taiwanese (aboriginals).
9. Expanding access to colleges and universities.
10. Creating a new System integrating teaching, guidance, and counseling.
11. Increasing the educational budget for the enhancement of educational research.
12. Accelerating the promotion of family value/ethics through parental education.

Finally, the "reform controversial stage" (1999–present) has been characterized by numerous negative public opinions against educational reform programs. Chou (2003) and Hwang (2003) identify some of the problematic reform areas, including:

1. the replacement of seven Ministers of Education between 1987 and 2003, which resulted in discontinuity and conflicts between various reform policies;
2. the lack of small-scale pilot or trial studies on the reform practices;
3. lack of in-service teacher training;
4. miscommunication and misinformation among schools, parents, and the government; and
5. increasing gaps between the urban versus the rural, and the rich versus the poor have also aroused great concerns in the country.

Yang (2001: 15) also argues that some of these problems are rooted in ideological conflicts behind education reform measures, the imbalance between competition and social justice, and the tussle for power among the private sector, parents,

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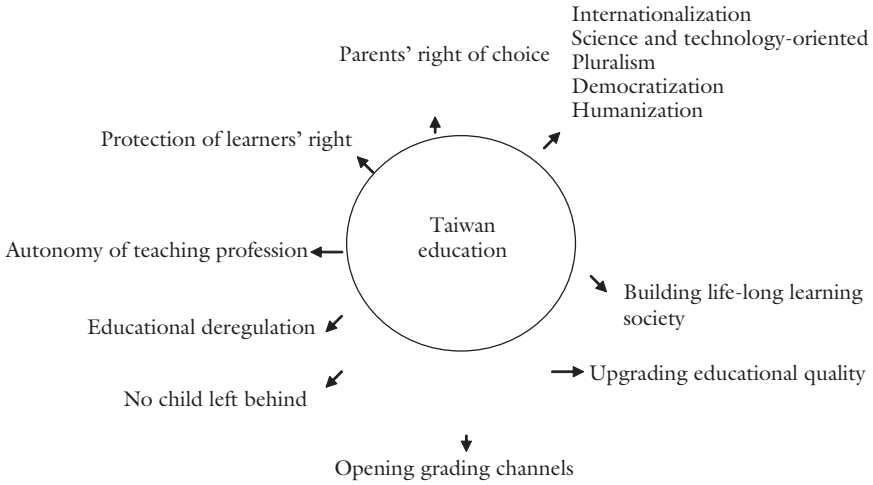
Figure 15.3
The Framework for Education Reform 1996



Source: Chou, 2003 (Psychological Publishing).

schools and government. Other problems are connected to the lack of new norms to maintain educational excellence, the shortfall of educational budgets, the crisis of teacher professionalism, and the lack of recognition of the school as the center for change (Pan and Yu, 1999: 81–82).

In conclusion, education in Taiwan has been used as one of the most influential avenues for national building and economic development. Based on the influences of Japanese educational practices and ideals during the colonization period, Chinese culture, and Confucian traditions from Mainland China, Taiwanese schools have experienced dramatic increases in enrollments. However, the pressure for credentialism and for examinations has remained constant through the 20th century. Many educational innovations have been launched to deal with examination systems, curricular contents and instruction, and to reduce government ideological control. In so doing, teachers will have more flexibility for self-governance and autonomy to accelerate students' creativity and thinking skills for the 21st century. Nevertheless, the increasing discrepancies between income distribution and resources between urban and rural areas, the dilemma between the pursuit of education quality versus quantity, and the balance between localization and internationalization have created numerous challenges and foreseeable risks for the people of Taiwan.

What will happen in 2020 if Taiwan continues to maintain the *status quo*? What will happen to the next generation of Taiwan after a series of nationwide education reforms? What are the follow-ups and outcomes? Who benefits and who suffers as a result of reform activities? These yet to be answered questions are for

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education systems in many countries around the world. As Taiwan actively participates in global events, how Taiwan learns from her education experiences in the reform era deserves more attention.

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