Education in the Asia-Pacific Region:
Issues, Concerns and Prospects 31

Chuing Prudence Chou
Jonathan Spangler *Editors*

Chinese Education Models in a Global Age

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Series Editors' Introduction

With the rising rhetoric of education for development and the continuous quest for quality education, international and national policies have increasingly focused on identifying and addressing the characteristics of what may be regarded as being an "ideal" education model for socioeconomic advancement. In line with this trend, international assessment exercises (such as PISA and TIMSS) have, more than ever, expanded in influence and profile into the global educational landscape. In the case of China, with its economic, cultural, and political rise, the position of the country in such international assessment exercises has been increasingly emphasized and magnified. Accompanying this search has been the quest to identify an ideal "Chinese" model that will define and classify the success of the Chinese education system. The influence and search for an encompassing "Chinese model" also exemplify in the broader education literature the role of undertaking such a search.

However, as Chou and Spangler argue and demonstrate in this book, the pluralistic orientation of education in China (and other systems influenced by it) testifies to the dynamic features of Chinese education, which, as they suggest, goes well beyond a bite-sized definition which is so often employed by others. The book gives readers valuable information about the various "models" adopted over time, through a discussion of the historical origins of Chinese education with regard to policy reforms; the role of Chinese education in different geographical contexts; and the theoretical bases of the Chinese "model" with regard to broader teaching and learning practice. This book brings to the fore ever-persistent issues, and the bases of Chinese education models, in this global age and seeks to engage readers in this lively debate. The work presents the intricacies of what can only be found in a dynamic and complex Chinese education influence.

(The Hong Kong Institute of Education) Rupert Maclean
(University of Malaya) Lorraine Symaco

Foreword

When I began my studies of Chinese education in the 1970s, the Cultural Revolution was raging in the Mainland, and Taiwan was soon to be identified as one of the four little dragons that followed Japan's striking successes with education and modernization. It was a fascinating moment in which one part of the post-Confucian world took the iconoclasm of the May 4th movement to an extreme in a violent uprooting of residues of Confucianism seen to stand in the way of revolutionary egalitarianism, while the other brought about a modern transformation that scholars such as Ezra Vogel explained in terms of a Confucian ethic parallel to Weber's fabled Protestant ethic (Vogel 1991). I still have a photo of a statue of Confucius lying broken on the ground beside his tomb in a graveyard close to Qufu, the birthplace of the great master. It was taken on my first visit there in October of 1980. I also have vivid memories of a first visit to Taiwan from Hong Kong in 1970, where I observed the beginnings of the modern transformation that has more than fulfilled Vogel's lively predictions.

At that time, there was little serious interest in Chinese education as a model that might have lessons for a wider world. Nor were the transformations to follow China's opening to modernization, the world, and the future under Deng Xiaoping or the dramatic changes in cross-strait relations between China and Taiwan easily envisaged. It was really only in the 1990s, after the end of the Cold War, when Samuel Huntington made his dire predictions about a coming clash of civilizations and the United Nations countered this with a call to dialogue among civilizations that educators in the Western world were able to open their minds. Only then did it become clear that there might be something valuable to learn in education from Eastern civilizations whose contribution to the European Enlightenment had been crucially important, yet largely forgotten. It was with this in mind that we organized a conference on "Knowledge Across Cultures" at the Ontario Institute for Studies in Education, University of Toronto, in 1992, inviting scholars from East Asia, India, the Middle East, and East Africa as well as Europe and North America to explore Chinese, Indian, and Islamic contributions to the Enlightenment (Hayhoe and Pan 2001). It was followed by a conference in China's *Yuelu shuyuan* in 1994, where the same group of scholars from around the world lived for one week within a Chinese

academy founded in 961 CE, over 100 years before the earliest European university, and discussed the ways in which East Asian epistemological and institutional patterns could contribute to global educational thought (Hayhoe and Pan 1996).

Now more than 20 years later, this volume bears witness to the rich possibilities of a range of Chinese models of education for stimulating dynamic improvements in teacher formation, pedagogy, curriculum, approaches to learning, and institutional patterns of education, from early childhood up to tertiary education. Nor does it avoid dealing with some of the perceived limitations of the Confucian heritage. Rather some of the most striking chapters suggest an integration of the strengths of this heritage with valued elements of progressive Western patterns. There are many vivid examples in the learning of languages and mathematics, citizenship formation, early childhood education, and graduate school pedagogy. The contexts cross a wide range of societies where there is an active Chinese diaspora, including the Philippines, New Zealand, Australia, USA, and Canada as well as Taiwan and Mainland China themselves. Phrases such as dilemmatic pragmatism and neo-patriotism are coined to elaborate the creative tensions that arise in the process of integrating ideas that appear at first glance to be polar opposites. Sensitive attention to differences of context, within and across distinctive societies, also to the processes whereby educational ideas and patterns are transferred and adapted, suggests most authors are well schooled in comparative education theory.

Editors Chuing Prudence Chou and Jonathan Spangler have organized the 24 chapters in three main sections, beginning from historical origins, then moving to East–West interactions, and finally considering the transition from theory to practice. The preface by Chou provides a helpful overview of the thinking that lay behind the development of this volume, while Spangler's final chapter highlights the diversity and dynamism of Chineseness, using terms such as hybridity and heterogeneity and considering norms, institutions, and individuals. The reader is thus given some threads or lines of thought to follow in the process of digesting this feast for the mind, heart, and spirit.

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Preface

China's cultural, economic, and political rise has brought the country to the forefront of global scholarly inquiry. In recent years, international assessments (e.g., PISA, TIMSS) have placed countries of predominantly Chinese descent or influenced by the Chinese writing system and Confucian philosophy at the top of student performance rankings. These results have attracted attention from researchers, educators, and policymakers around the world. From this, lively debate has emerged as to whether or not a distinct Chinese education model can be identified and, if such a model exists, whether or not it is a contributing factor to the educational successes of countries heavily influenced by Chinese culture and philosophy.

Inspired by these debates, this volume embraces the lack of consensus surrounding the topic, drawing upon a diverse set of voices from researchers around the world. It builds from the premise that there is no straightforward, clear-cut way of distilling the notion of a Chinese education model into the bite-sized definition that academics and policymakers so often desire. Even the concept of Chineseness is rich with ambiguity, interwoven with ideas of history, culture, geography, and ethnicity. While the contributing authors have been encouraged to conceptualize Chinese education models from their unique, individual perspectives, the "Chinese" aspect has been interpreted in the broadest sense as *huaren*, extending the concept into the wide range of geographic and cultural spheres in which Chinese influence exists in today's global age. By welcoming a wide range of perspectives from a diverse team of authors, this volume aims to serve not as a book-length definition of the Chinese education model but as a platform for dialogue and a foundation for future research.

The book is divided into four parts, each comprising a distinct theme that may be familiar to comparative education researchers as well as those with a more general interest in education and culture. In Part I "When Past Meets Future," a collection of analyses of the historical origins of the Chinese education model set the foundation for the volume. Particular emphasis is placed on the effects of policy reforms, including educational reforms specifically and those related to political systems, economics, and culture. In Part II "When East Meets West," the key similarities and differences between the Chinese education models in different geographical contexts take center stage. Discussions of the role of Chinese education in Taiwan,

New Zealand, the Philippines, Canada, and Australia, as well as in more globally focused cross-country analyses, come together to illustrate its function in a global age, as highlighted in the title of the book. In Part III "When Theory Meets Practice," the chapters describe the philosophical and theoretical bases of the Chinese education model and their interplay with pedagogy and education in practice. It is, after all, the relationship between reality and the theoretical framework constructed to explain it that forms the essence of any model. In Part IV "Conclusion," the preceding 23 chapters are synthesized into a framework that aims to contribute to future research on Chinese education by highlighting and reframing the wide-ranging perspectives from the book into a cohesive and structured summative analysis.

As readers delve into the content of the book, they will above all become aware that it is not a single, monolithic Chinese education model that is described. Instead, the idea of Chinese education models, in the plural, more accurately describes the reality of the issue in terms of history, theory, and practice. The diversity of views presented in the volume is a testament to the dynamic and multifaceted nature of Chinese education models in a global age. From the initial conception of the book, the editors have sought to embrace this aspect of the topic. We greatly appreciate the many months of effort that each and every one of the contributors has put into developing their chapters and making this book a reality and, above all, sincerely hope that its content will be an inspiration to our readers.

Taipei, Taiwan

Chuing Prudence Chou
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Ming Ming Chiu is Charles Hicks professor of research methodology at Purdue University. He earned his bachelors in computer science at Columbia University, masters in interactive technology at Harvard, and PhD in education at UC-Berkeley. He serves on the advisory board of Mainland China's Ministry of Education's National Evaluation of Primary and Secondary Schools. He invented two statistics methods: statistical discourse analysis (SDA) and multilevel diffusion analysis (MDA). SDA models online and face-to-face conversations, showing how students' social metacognitive skills enhance their micro-creativity. MDA shows how ideas spread through populations and detects corruption in the music industry. He also

showed how economic growth, inequalities, and cultural values affect nearly 500,000 students learning in 65 countries. Supported by 26 grants totaling over $4 million, he disseminated his research through 147 publications (including 81 journal articles), 3 television broadcasts, 17 radio broadcasts, and 148 news articles in 21 countries and regions.

Chuing Prudence Chou received her PhD in comparative and international education from the University of California, Los Angeles, and is a professor in the Department of Education at National Chengchi University, Taiwan. Her research interests include comparative studies on international higher education reform, gender equity in education, and cultural exchange in rival states. She edited a book entitled *The SSCI Syndrome in Higher Education: A Local or Global Phenomenon* (2014), which touches upon the ongoing crisis caused by the world-class university rankings and makes a cogent argument for culturally responsive research in the social sciences and humanities across the non-English speaking world. For further information, please visit http://www3.nccu.edu.tw/~iaezcpc/en/.

Wei-Wei Da received her PhD in sociology from the University of Sydney, Australia. She is an associate professor in the Department of Family Studies at the Brescia University College, the University of Western Ontario, Canada. Courses she is teaching include introduction to family studies, immigration and new Canadian families, family practices in the global setting, family resilience, and qualitative methods in family research. Her research interests include immigrant families, childrearing practices, gender relations, aging, and overseas Chinese in general. Examples of her recent scholarship include *Transnational Grandparenting: Child Care Arrangements Among Migrants from the People's Republic of China to Australia* (2003), *Support Networking Strategies of Recent Professional Chinese Immigrant Women with Young Children Living in London, Ontario* (2010), and *Later Life Migration: Sociocultural Adaptation and Changes in Quality of Life at Settlement Among Recent Older Chinese Immigrants in Canada* (2015).

Weiling Deng is a PhD candidate in social sciences and comparative education at UCLA. Her research aims to reach a deeper understanding of contemporary Chinese higher education from an integrated view that combines history, philosophy, sociology, and literature. She believes that one of the most important things Chinese universities should concentrate on is the construction of common values that go beyond the textbook-dictated general education, are sensitive to present social phenomena, and break down uncritical judgment of social events. She has recently focused on the lineage of modern Chinese women intellectuals in the twentieth and twenty-first centuries to analyze the relationship between the development of Chinese universities, the socialization of women at the higher education level, and the building of the public sphere in China.

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He is president of the Asian Association of Indigenous and Cultural Psychology (2010–), past president of the Asian Association of Social Psychology (2003–2005), and was principal investigator of the "In Search of Excellence for Indigenous Psychology" research project sponsored by the Ministry of Education, R.O.C. (2000–2008).

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Julia Kwong is distinguished professor emerita at the University of Manitoba and fellow of the Royal Society of Canada. She has published widely on education and other areas of China. Her major book publications include *Cultural Revolution in China's Schools May 1966-April 1969* (1988), which received the Book of the Year Award, and *The Political Economy of Corruption in China* (1997), a seminal work on the topic.

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Part I
When Past Meets Future

Chapter 1
Embedded Models of Development: Educational Changes in the People's Republic of China

Julia Kwong

Abstract This chapter examines China's educational development against the backdrop of the country's economy between 1949 and 2000 to illustrate the importance of the social milieu in the emergence and execution of educational models. In the first period (1949–1976), the government introduced an educational program catering to the requirements of a socialist economy; in the second period (1976–2000) educational policies were modified to meet the needs of a free market economy. These different economic demands led to very different educational priorities and organizations in educational administration, curriculum, teaching methods and reward system. Tracing the introduction of these two polar opposite educational models in one country alert us to important role of the ever evolving ideational and structural context in the emergence and execution of an educational model, and the challenges facing the borrowing of a model from another country.

1.1 Introduction

In this age of globalization with advances in communication technology and growing exchanges among nations any accomplishment or success in a particular country becomes known almost simultaneously in others. Nations sharing similar goals admire these achievements, emulate the example, and introduce similar measures in their own countries (Hayhoe & Bastid 1987, Stevenson & Stigler 1992). In the 1960s and 1970s China's pursuit of self-reliance and success in expanding educational opportunities to large sectors of her population won the admiration of scholars and politicians in the third world. These attempts became known as the Chinese model of development. More recently, Shanghai students' top scores in PISA (Program for International Student Assessment) ranking won admiration from the

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developed world, and delegations visited Shanghai to understand the secret to its success.

Educational practices in China won accolades from the outside world in each instance but for very different reasons. The first was for raising the population's educational standing with limited resources in a relatively short time; the second, for the academic attainment of her students. These quantitative and qualitative goals are not necessarily conflicting nor mutually exclusive; but in a real world with finite resources the attainment of one goal is often accomplished at the expense of the other reflecting very different priorities in educational policies. Indeed the policies in these two periods emanate from two very different models of education. The first was oriented to building a socialist planned economy; and the second, a market driven one.

The following study of 50 years of education between 1949 and 2000 in the People's Republic of China offers a rare and unique opportunity to study two polar opposite development models against the backdrop of one country. What transpired in the first 25 years of education in modern China cannot be more different from that in the last 25 years. Making sense of this about turn in educational model will help us appreciate the contextual importance in adopting an educational program. If changing circumstances in one country call for such a radical turn in educational policies, one should be wary adopting measures tried out in another country in our globalized world.

1.2 Models of Economic Development and Models of Education

A model is a representation with the essential albeit simplified features of a larger structure. The creation of a model comes after a process of careful analysis of the past or what exists. The end product may be an abstraction of what is there and serves as a heuristic device to summarize and approximate a complex reality; or it can be a physical prototype or blueprint for the future. In the case of social development, even if a model provides only a description of what has transpired, it can provide pointers to the future for latecomers who have not reached the more advanced stage attained by other countries.

There are many different models of development; perhaps the two most familiar ones in the West are the polar opposite ones of Walt Rostow (1962) and Karl Marx (1975). Both undertook a longitudinal analysis of development in society. Rostow saw development as a process moving from the traditional society into the precondition for take off, the takeoff stage, followed by the drive to maturity and the final stage of high mass consumption. Marx saw society as evolving from ancient, feudal stage, to modern bourgeois modes of production. Their descriptions of the history of economic development largely overlapped, but with different emphases. Rostow highlighted the infrastructural arrangements for a burgeoning market and saw a mature consumer market as the end stage; aside from the means of production Marx focussed on ownership and the distribution of wealth. Rostow did not foresee

much future radical change in the economic structure; but Marx advocated and projected communism as the final stage in this process (Baran & Hobsbawn 1962; Cohen 2001). These two models have inspired governments to introduce different policy programs to reach their "final" stages. Governments subscribing to the former have strived to increase production and build a regulated free market economy and those in favour of the latter have introduced measures to realise a more equitable distribution of wealth, sometimes even at the expense of increased output.

China's educational development will be examined against these two economic models because the economy is perhaps the most powerful sector shaping education in a society. An economic model has ramifications beyond its own arena in defining the way education evolves. Among education's many functions, a major one is to cater to economic needs. It supplies a labour force with the appropriate skills and ideological orientation to support and augment economic growth; consequently the education system of each society differs depending on what these labour requirements entail. The organization of education and the knowledge taught in the schools may vary depending on the society's technological needs at different junctures; the ideology imparted in the educational system closely reflects the values underpinning the social organization of the economy and society. China's radical changes in its educational model followed the replacement of the Marxist economic model with Rostow's.

Micro-level educational models are popular in Western academia with models of educational expansion, models of educational finance and administration, curriculum models for the different subjects taught, models of teaching methods for the different subjects, and other aspects of education. Like any model, these are descriptions of steps taken or to be taken to attain particular goals by different sectors of education. In the decentralized authorities of Western liberal democracies, policy makers have authority and control only over a certain aspect of education; and educators restrict their attention to the specific area within these jurisdictions to create their different models. In the Chinese system of central planning, education is centrally controlled with the central government coordinating and its representatives micromanaging the different educational activities, such as, financing, curriculum, administration and teaching methods. As a result, educational policies and measures are much better coordinated to form a consistent whole than in the West. Consequently we can examine education at a macro level to provide a comprehensive view of educational developments and to appreciate the linkages among the different aspects of education as well as their links to the larger economic context.

1.3 Phase One – Educational Development Under the Marxist Model 1949–1976

The People's Republic of China came into existence in October 1949 after more than a century of foreign aggression, foreign occupation, and civil war. In the Chinese Communist party's parlance, the party "liberated" China from exploitation and foreign occupation to build a strong economy with equitable distribution of

wealth and opportunities. To this end, education was to produce "red and expert" individuals; that is, knowledgeable and skilled individuals with a commitment to Marxist ideals. They were to be willing to obey the party and would selflessly contribute to the public good (Pepper 1996).

The country in 1949 was in shambles and so was its educational system. There were only 346,769 primary schools, 5216 secondary schools, and 205 universities (Achievement of Education in China 1985, p. 20) for a population of 541 million (Statistical Yearbook of China 1981 1982, p. 89). This three-tier educational system introduced at the turn of the twentieth century was modelled after the West – those countries that had carved China into spheres of influence to advance their individual interests. An educational system with such a suspicious beginning could not be trusted. The government took control of all the schools and their administration. School financing, teacher appointment, curriculum design, student enrolment, all came under government jurisdiction; later even job allocation for graduates became a government responsibility. The Soviet Union, a socialist country, became China's major political ally and role model in her development strategies. Among the changes patterned after the Soviet Union, the most obvious was perhaps in university reorganization. In China, the Soviet tertiary system with specialized institutes of liberal arts, pedagogy, technology, chemistry, and other disciplines replaced the comprehensive universities modelled after the West.

A less visible but far-reaching change was in the curriculum. Education was to produce "red and expert" individuals to "serve the people." For this purpose, the government prepared a set of textbooks to be used for every level of education across the nation. Because of the nature of its disciplines, teaching materials in the sciences remained largely unchanged but with greater emphasis on the applied. In contrast, disciplines in the arts and social sciences sensitive to social and cultural influences experienced radical transformation. Soviet literature replaced Western literature; history condemned the evils of feudalism and imperialism and lauded the achievements of socialism; and sociology and psychology deemed bourgeois disciplines were expunged from the university curriculum. Courses in politics or Marxism and participation in labour became mandatory at all levels in school. The first exposed students to the ruling ideology; the latter provided the opportunity to put classroom knowledge into practice and develop rapport with the working class. These two courses remained staples in the curriculum but the time devoted to them waxed and waned depending on the political climate at the time. During political campaigns, time spent on academic courses was often curtailed to give more time for these activities.

Teaching these two courses would require pedagogy different from the conventional one. When the Communists took power, teachers working in school remained in their jobs even though they were not necessarily knowledgeable of or sympathetic to communism. But for a lack of trained sympathetic personnel, the government kept them on. Teachers generally followed central directives not necessarily out a commitment to government politics but because they were trained in the traditional Confucian culture to obey authority, or complied simply out of fear. But

they retained their habitual teaching style and reduced learning Marxism to ritualized drills and rote. Furthermore, teachers continued to see themselves in the traditional role as superior to students and behaved accordingly; students were cowed into silence and submission (Kwong 1979). There was indeed some truth in the May 1966 Beijing University student accusations of school administrators behaving like arrogant bourgeois officials; and this incident gave Mao the opportunity to launch the Cultural Revolution (1966–1976) (Kwong 1988).

Equity is a major Marxist goal. Prior to 1949 educational opportunities were expensive and limited only to the very rich. The new government lowered tuition and expanded educational facilities to reach a broad sector of the population. China had greater success in this respect than in its pedagogic reform because its implementation could be accomplished through administrative fiat and relied less on the participants' orientation. In this period, the number of primary and secondary schools tripled to over 1 million primary schools and 194,595 secondary schools; and enrolment increased almost 7 times at the primary level and 4.6 times at the secondary school level. The number of universities nearly doubled and enrolment increased fivefold (Achievement of Education in China 1985, p. 22).

A Chinese policy innovation made this phenomenal growth in education possible. Resources in China were scarce. After the political rift with the Soviet Union and withdrawal of Soviet aid in 1960, China was left without outside help so that the government had to modify the economic plan and make concomitant changes in education spending. It adopted the strategy of self-reliance and "walking on two legs," that is, to simultaneously develop industry and agriculture in the economy; and formal and informal schools in education. Aside from building regular schools, the government harnessed local resources to expand worker-peasant schools, agricultural schools, spare-time schools, work-study schools, and literacy campaigns. Learning practical skills in industrial and agricultural production took precedence over academic knowledge in these schools. Although the academic standards in these schools were lower than in the conventional ones, they provided educational opportunities to the disadvantaged sectors of the population in the generally disadvantaged areas. This approach to educational expansion became known in the outside world as a unique Chinese model of development (Table 1.1).

Table 1.1 Educational growth in China

	1949	1976	2000
Number of primary schools	346,769	1,044,274	553,622
Enrolment	24.4 million	150 million	130 million
Number of secondary schools	5216	194,595	93,935
Enrolment	12 million	59 million	85.2 million
Number of universities	205	392	1042
Enrolment	0.12 million	0.56 million	5.5 million

Sources: Achievement of Education in China 1949–1983, pp. 20–23; China Statistical Yearbook 2001, pp. 650–651

1.4 Phase Two – Education Under Rostow's Model of Market Economy 1976–2000

If China was successful in her educational reforms, why did she abandon them? It depends on what one considers educational success. Education is not an institution insulated from other social institutions; at the very least it evolves in tandem with the economy. With the trend towards globalization, the Chinese government no longer measured the country's achievements by conditions in the pre-liberation era but looked towards other nations and found itself behind in technology, industrial output, and national income. Mao's death in 1976 provided the opportunity to deviate from the purist Marxist approach. The policy change was not as organized or clean cut as that in 1949; Deng Xiaoping, the protagonist of these changes, characterized the process as exploratory "groping stones to ford the stream." Deng might not have heard of Rostow or deliberately followed his model, but the goal Deng envisioned was identical with Rostow's final stage – China was to raise her technology level, increase national output, and create a free market. To do this, education had to be re-oriented to produce knowledgeable, motivated, competitive, and innovative graduates. China looked to the advanced developed countries of the West for directions (Pepper 1990).

Since China remained under one-party rule, the measures undertaken remained coherent and consistent but had a different goal. Just as the government gradually relinquished control of production and distribution to make room for individual initiatives in the free market economy, government control of education relaxed. Authority in the financing and expansion of universities was devolved to the provinces; that for the primary and secondary schools to the counties. Universities and schools acquired greater autonomy in finance, staffing, student enrolment, and course offerings. In 1997 private schools were legalized and later on collaboration with foreign countries was allowed. The government no longer allocated jobs to graduates; they had to find work themselves. Again modelling on the West was most obvious in university restructuring. Universities resembled once more the Western comprehensive institutes of higher learning with the Chinese specialized institutes of sciences and technology expanding to teach liberal arts and social sciences; and liberal arts and sciences universities venturing into professional training.

Educational priorities changed – quality was no longer sacrificed for quantity. Substandard schools were closed. About 50,000 primary schools shut down in 1976, and another 60,000 in the next year. This drastic reduction in a short time did not reflect a dramatic demographic change in the school-age population but was symptomatic of a deliberate change in government policy. Consolidation of primary and secondary schools continued but at a slower pace in the following two decades; this continued gradual reduction could be interpreted as a fall out of the one child policy enforced since 1979. School age population at the primary level fell. The numbers of primary and secondary schools were halved between 1976 and 2000; enrolment at the primary level was 13 % lower than that in 1976. Enrolment at the secondary level increased by 44 % because not all primary school graduates attended

high school in the earlier period. On the other hand the number of universities steadily increased from 392 to 1041; and enrolment jumped tenfold in the same period (Achievement of Education in China 1985, 20–24; China Statistical Yearbook 2001, 650–651).

The emphasis was clearly on improving educational quality and developing higher levels of education. The goal of "quality education" was to produce a cadre of skilled personnel to support the economy and push the boundaries of science, and not to provide workers for factory production lines or for the farms. The young were urged to excel academically and be patriotic by raising the nation's level of scientific achievements and industrial output. Political and labour education of the earlier period was de-emphasized in school; students took courses in "moral education" instead. Nationwide university entrance examination suspended during the Cultural Revolution was reinstated in 1979; so were public examinations at the high school level. Only those who excelled in these exams continued to the next level of education. Moreover, schools delivering higher student scores in these competitive public exams were rewarded. They had increased government funding, better facilities, and more experienced teachers. To encourage scientific research, the central government launched Project 211 in 1993 providing 100 top universities with special funds so that they could develop into world-class universities. In 1998, 40 universities were identified in Project 985 and were provided with additional resources to push the frontiers of knowledge.

The government encouraged academic exchanges with Western countries, inviting Western scholars to lecture in China and sending local scholars to study in the West. To facilitate learning from the West, English was taught initially at the secondary level and then began at the primary level. Sociology, psychology, and business once condemned as bourgeois disciplines were re-introduced in the universities. Books in Western languages were translated into Chinese, and Chinese publishers even collaborated with Western curriculum experts to produce school texts. The primary and secondary school curriculum was revised; academic standards were raised; and Western methods of teaching and learning were introduced.

Like teaching politics in the earlier era, instilling the creativity and independent learning of the West was held back by the teachers' level of preparedness. Chinese classrooms were teacher-centered and Western ones generally more student-oriented. According to Western pedagogy, teachers were to introduce fun and flexible ways of learning into the classroom to stimulate and motivate students, and encourage independent thinking, creativity, and exploration. Chinese teachers steeped in the traditional culture that respected teacher authority and stressed obedience were unprepared for this new approach. Many found the Western philosophy of teaching and learning alien; others rejected it outright. Even those favourable to this approach had difficulties practicing it. They were pressured by the necessity of preparing students for the very competitive public examinations and more often than not had to resort to drills and rote. Thus, little was changed in the classroom. Ironically, these practices did not stop Chinese students from gaining the highest scores in PISA and have perhaps contributed to their success (Table 1.2).

Table 1.2 Educational models in China

Socialist model 1949–1975	Free market model 1976–2000
Produce "red and expert" individuals	Produce entrepreneurs with advanced knowledge
Emphasis on expanding educational opportunities	Emphasis on raising quality of education
Develop formal and informal education (part-work part-study schools, etc.)	Develop formal education
Focus on primary school expansion	Focus on university expansion
Model after Soviet Union	Model after Western countries
Relatively isolated from foreign countries	Academic exchanges and collaboration with the West
All schools state control	Aside from public schools, private schools allowed
Centralized educational administration	Devolution of authority to provinces and counties
Government controlled finance, teacher appointment, curriculum, student enrolment, graduates' job allocation	School administration had some autonomy in finance, teacher appointment, enrolment. Graduates looked for their own jobs
Curriculum focussed on practical knowledge	Curriculum focussed on academic and advanced scientific knowledge.
Politics and labour education integral part of curriculum	Less emphasis on political and labour education.
Marxism, Leninism and Mao Tse-tung thoughts taught in political classes	Aside from Marxism, patriotism, citizenship and moral education included in political classes.
Classroom teaching to integrate theory and practice	Classroom teaching to nurture creative thinking and independent learning

1.5 Embeddedness of Educational Models

The embeddedness of education in the ever-changing context of society and especially in the economy of that society is undeniable when considering these 50 years of educational development in China. The politicians' choice of an educational model may be subjective, but their preference is grounded on their careful assessment of the particular situation of their country. The Chinese Communist party saw the Marxist model of development as the only way to escape foreign domination and class exploitation. Continuation on the pre-revolutionary path would only lead to more of the same. Therefore in 1949 China abandoned the Western model and turned to socialism. To reach this goal, the government expanded educational opportunities and built a school system that would meet the needs of the country's socialist orientation and very primitive level of economic development. In the late 1970s, Chinese leaders abandoned this approach when they realized that focus on equity and meeting existing economic needs had left China behind other countries in science, technology, and national output. They wanted to emulate the countries that were successful in these endeavours and turned to the West.

Macro-economic decisions frame the direction of a country's educational development and organization. The administration of education, the expansion of educa-

tional facilities, the curriculum, teaching methods, the rewards system, and other aspects of education all catered to the needs of the economy; and accordingly changed with the changes in the economy. The educational reforms in the first period were deliberate attempts to reach the Marxist utopia. The school system was structured to produce individuals with the knowledge fundamentals needed in a socialist economy and who were willing to follow Communist party directives. Education in the second period was to produce the knowledgeable, entrepreneurial individuals capable of raising the country's science, technology, and production output.

To take the example of educational administration, under the planned economy in the earlier period the government kept a tight control of all aspects of educational administration. In the second period, the government was still centralized compared with the West but it has become more open to a market economy and individual initiatives, educational administration moved in a similar direction. School administrators were initially given control in the hiring and firing of teachers, next they could take initiatives in school financing, and later they were given a say in student enrolment. By the mid-1990s, even private schools were tolerated and legalized. Another example of this dramatic turn over was perhaps in the educational programs delivered; these could not be more different than they were in the two periods. In the first period, educational opportunities expanded to reach a larger population. Political education took precedence over academic work; and teaching focussed on practical rather than academic knowledge. In the second period, the emphasis on quantity and quality reversed. The number of primary and secondary schools shrank in the early years, only higher education steadily expanded. Academic standards in the schools were raised as a way to catch up with the West; and Marxist education gave way to nurturing citizenship and nationalism. All these changes were made to meet the needs of the changing economy.

A country's economy affects education at more than one level. Aside from setting the direction of educational development and suggesting policies, the measures taken are limited by the material conditions available in the economy. An economic model suggests the desirable and sets the directions for education; but the economic material condition defines the parameters of what is possible and even modifies the educational policies suggested by the economic model. Just as there are more ways than one to reach Rome, there is more than one way to reach a particular goal. The Chinese Communist party's determination to reach the Marxist utopia in the first period never wavered; yet the strategies used to expand educational facilities changed. Left to its own resources and devices after the withdrawal of Russian aid, China's initial attempt to expand only formal education gave way to "walking on two legs" by developing formal and informal education at the same time so as to stretch the country's resources and reach a larger population. Focussing on university education almost exclusively in its attempts to raise the educational quality in the second period is also likely a result of limited resource availability.

Even with the focus on the impact of the economy on education in the analysis, the influences of other social forces impinging education are obvious. To take an

example from the political arena, political education and labour participation were considered important throughout the first period, but time spent in these activities far exceeded that devoted to academic training in the heightened political fervour of the Cultural Revolution. In the second period, when the politic climate was tepid, time spent on these activities diminished. Even the content of political education changed. Political courses expanded from the exclusive study of Marxism-Leninism and the thoughts of Mao Zedong of the earlier period to include an emphasis on citizenship, morality, and nationalism in education of the younger generation. To use another example, traditional culture played a role in both periods at once supporting and undermining policy execution. The teachers' commitment to the traditional Confucian culture guaranteed their docility and conformity to central directives, but the same commitment encouraged them to rely on drills and rote learning thus undermining the government's intention to instil in students a commitment to Marxism in the earlier period and creativity and independent learning in the second.

It is impossible to exhaust the intricate web of relationships between education and the economy in this short chapter, nevertheless treating educational development between 1949 and 2000 as two distinct models has allowed us to see clearly how changes in the economy can dramatically affect educational priorities, management, and organization. Furthermore, even with our focus on the economy, we cannot but notice the impact of politics and culture on education. In keeping with our theme of models, we can perhaps visualize this embeddedness of education in its social milieu in a three-dimensional model with education, the economy and other social sectors each as different webs with numerous links connecting them with each other. In turn each web has its own interlocking nodes representing the components within each arena (e.g., finance, curriculum, pedagogy, teaching training, etc. in education) and each node with its tentacles reaching out to nodes in the other arenas. Since education is so snugly embedded in a social milieu, the success of an educational model (whether it be micro or macro) cannot be attributed only to the ingenuity of the measures taken at a particular period of time, its appropriateness to the concrete situation and the support provided by one or the other aspect of its social milieu have to be acknowledged. If this is the case, the measures or models adopted have to be suitable to the ideational and structural context. Since no two countries have identical infrastructures even if they share similar goals and orientations, borrowing models or policies from another country has to be handled with extreme care. What works in one country may not work in another. Even in the best scenario with countries sharing more or less similar backgrounds, an import can be used only after a very careful process of study, tailoring, and modification to meet the needs of the indigenous conditions. More than likely, successful models in another country probably can only serve as useful references but the solutions must be found within the country under consideration at a particular time.

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Chapter 2
The Chinese University 3.0 in a Global Age: History, Modernity, and Future

Jun Li

Abstract Some contend that almost all universities follow institutional patterns derived from Western models and that all Asian universities are based on European academic models and traditions. However, the Chinese University 3.0 may be exceptional, demonstrating key characteristics of China's scholarly tradition, though it has been strongly influenced by various Western models over the twentieth century. Taking a historical-cultural approach, this chapter constructs the concept of the Chinese University 3.0, investigating its key values and features and possible contributions in a global age. First, the chapter differentiates the three distinct stages of Chinese universities in history and looks into their institutional development and characteristics. Then, it focuses on the Chinese University 3.0 moving toward world-class status and mass higher education by reflecting on such core values and features as self-mastery and intellectual freedom, humanist (*Zhi-Xing*) mission, and institutional diversity (*He'er Butong*), to demonstrate how they differ culturally from the dominant Anglo-Saxon and American models but share some commonalities with the continental European and Japanese models of the university. The final section considers policy implications of the emerging Chinese model, its lessons for reform and practice, and its potential role in fostering vibrant democracies and global dialogue among civilizations in the future.

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2.1 Introduction

In recent decades, efforts to raise the quality of higher education and nurture world-class universities (WCUs) have grown apace around the globe. Nowhere has this been more evident than in China, and the emerging Chinese University 3.0 is likely to have considerable global influence, given China's rising economic and geo-political importance. While most other societies in East Asia moved to mass higher education systems well before they launched focused efforts to create WCUs, China has taken on both endeavors in addition to internationalization over the same period since the late 1990s.

In this chapter I look first at the historical trajectory of Chinese universities from medieval times to modernity by differentiating it into three macro, distinct stages, i.e., Chinese Universities 1.0, 2.0, and 3.0. Then, I reflect on the core values and features of the emerging Chinese University 3.0, such as self-mastery and intellectual freedom, humanist (*Zhi-Xing*) mission, and institutional diversity (*He'er Butong*), and identify the ways it differs culturally from the dominant Anglo-American model while sharing some commonalities with the continental European and Japanese models of the university. Finally, I consider the policy implications of the emerging Chinese University 3.0, its implications for higher education reform and development, and its potential role in fostering vibrant democracies and global dialogue among civilizations in the future.

The Chinese University 3.0 is an inclusive term that refers to the latest developmental stage of Chinese universities with emerging features, comparatively speaking with its earliest and later forms represented respectively by the ancient Chinese University 1.0 and the modern Chinese University 2.0. The idea itself is not new at all to differentiating the developmental stages of Chinese universities, but these new concepts can better capture and be more focused on the distinct features of Chinese universities in each of the three stages over time, especially from a macro, historical, and cultural lens.

2.2 The Chinese University 1.0

The Chinese University 1.0 can be traced back to the twelfth to eighth century BCE, when such higher institutes as the Piyiong and Pangong were constantly established (Sun 2009, pp. 19–20). The Taixue (Confucian Institute) was the first imperial university institutionally created for political reasons in the Han Dynasty in 124 BCE (Sun 2009, pp. 109–110), one thousand years earlier than the Al-Azhar University which opened in 970 in Egypt and the University of Bologna in 1088 in Italy, both created for religious purposes and widely viewed as two of the oldest universities in the world. The Taixue heritage was carried forward in the following dynasties in China over two thousand years until the collapse of the Qing Empire (1644–1912) and was developed into various forms in history, such as the Guozixue in the Western Jin Dynasty (265–313), the Guozisi in the Northern Qi Dynasty (550–577), or the

Guozijian in the Song Dynasty (960–1056). In addition to the institutionalized imperial university system, there were other specialized imperial institutes, such as the Shuxue (Institute of Calligraphies), the Suanxue (Institute of Mathematics), the Wuxue (Institute of Martial Arts), the Yixue (Institute of Medicine), and the Lüxue (Institute of Laws), coupled with the civil servant examination system (*keju*). The imperial universities were not only the higher education institutions in China's medieval times, but some of them, e.g., the Taixue and Guozijian, served as the state administrative department of education, equivalent to the ministry of education nowadays. The dual role of the Taixue system made the imperial universities institutionally integrated with the state system, and such a tradition is stilled carried on in other forms in modern China, such as the Presidential Responsibility System under the Guidance of the Communist Party.

At the same time, private higher education institutions coexisted in parallel with the Taixue (and Guozijian) system in China's medieval history. At the very beginning, the Jixia Academy was established by Duke Huan in the state of Qi in the third century BCE, an institution that met all three characteristics of Studium Generale, the earliest form of Western universities: geographically open, systematically higher, and multidisciplinary education (Rashdall 1895, vol 1, p. 9). At one time it had a community of more than ten thousand students and teachers. While it was an imperial higher institution financially sponsored by the state of Qi, it was effectively autonomous and provided space hosting many private schools to debate with and learn from each other, without any intervention from government. It was self-governed, with teachers and students who adhered respectively to the Confucian School, the Taoist School, the Huanglao School, the Yinyang School, and others. Students and teachers came and went as they pleased, and the teaching was open to all, regardless of their academic background. Regular forums were held where teachers and students of different schools could debate with each other or hold discussions (Li 1988; Needham 1954, pp. 95–96; Twitchett and Faribank 1986, p. 73).

Later in the eighth century during the late Tang Dynasty, the mainly autonomous *Shuyuan* (academies) came into being as a unique type of private higher education institution in Chinese history (Li et al. 1994, pp. 9–17). They are widely seen as inheritors of the spirit of the Jixia Academy, and some of them were modelled from Buddhist or Taoist temples that focused on script studies in unique forms of meetings and procedures (Li 1994, pp. 449–453; Li et al. 1994, pp. 140–167), somewhat like the origin of cathedral schools before the rise of Western universities in medieval Europe (Jaeger 2000). They were set up by scholars to provide an autonomous learning environment where students could engage in study without intervention from government. Over its history of 1200 years, the *Shuyuan* accumulated significant experience in organizational governance, curricular design and approaches, ways of integrating knowledge and practice, and a unique style of relationship between students and teachers. Together with the imperial university system, the *Shuyuan* made the tradition of the Chinese University 1.0 very dynamic and diverse, combined with both public and private and both comprehensive and specialized types of higher education institutions, in which core curricula were centered on political ethics and inclusive of other learning contents (Lenzen 2015).

2.3 The Chinese University 2.0

The Chinese University 2.0 came into existence in the late nineteenth century, and again for political reasons. The collapsing late Qing Empire tried to revive its regime with various reforms, such as the Self-Strengthening Movement (1861–1895), the Hundred Days' Reform (1898), and the New Reform (1901–1911). These political reforms consistently sought to develop new, practical talent as opposed to revitalizing the traditional Confucian intelligentsia. Subsequently, it became widely accepted that renovating the old education system and establishing modern universities were vital and urgent tasks. With a strong catch-up mentality under the semi-colonialism,[1] a number of politicians and educators agreed that modern universities adopted from the Western models were crucial for meeting the political goals of national survival and self-strengthening. Thanks to these political efforts, the Chinese University 2.0 was formed since 1895, when the Zhongxi Xuetang (School for Chinese and Western Studies) was opened in Tianjin by Sheng Xuanhuai (1844–1916) as the first modern university in China.

The Chinese University 2.0 has experienced various stages of modernity over the past century up to the last 1990s. For example, Hayhoe (1996) differentiates its development into at least three stages, i.e., the Nationalist Period (1911–1949), the Socialist Period (1949–1978), and the Reform Period (1978–1990), each accompanying a radical sociopolitical and cultural transformation in China. But if the very initial beginning of Chinese University 2.0 is included, there should have the following three stages: Establishment (1895–1911), Experimentation (1911–1949), and Institutionalization (1949–1998).

The initial Establishment Period occurred when the late Qing Dynasty was struggling for its survival against Western imperialism and colonialism, so almost all universities opened that time were for political purposes and emulated from the West through Japan. The Experimentation Period saw the contradictions in the integration of Western values of institutional autonomy and academic freedom, mainly from Germany and the United States, into the Chinese way of higher education and its relation with the state (Hayhoe 1996). Various Western models, such as the American, the British, the German, the French, and the Japanese, were all tried out by some individual institutions or nationwide. Meanwhile, the independence of higher education in terms of institutional governance was appealed strongly in this stage, minimizing the unwanted intervention from the state (Li 1998, pp. 286–299). The Institutionalization Period was dominated by socialist ideology in the restoration, setback, and development of higher education between 1949 and 1998, and the Soviet Union model used to have a profound part in this process of modernity. Furthermore, the proletarian dictatorship controlled universities in Mainland China during the Cultural Revolution (1966–1976). After progressive leaders such as

[1] Although China was never completely colonized in the nineteenth and twentieth centuries, many of its parts, such as Hong Kong, Macao and Taiwan, alongside some parts in Shanghai, Shandong Province and in the Northeast, were colonized by Japan, France, Germany, Portugal or the U.K.

Deng Xiaoping had taken over the political power of China, the Chinese government adopted a reform and open door policy in 1978 in order to modernize the country; Chinese universities were able to recover and entered a period of continuous modernity up to 1998, when the then President Jiang Zemin announced his ambitious plan to build WCUs (Jiang 1998). Although the Chinese University 2.0 was predominant by Western models of the university, the role of the state and its sociopolitical mission and institutional diversity were both constantly and explicitly observable throughout its various stages. However, it has been challenged by the intensifying process of globalization, led with the WCU movement, in which symbolic relevance and cultural values become central concerns (Elman 2000).

2.4 The New Era of the Chinese University 3.0

The emergence of the Chinese University 3.0, which has started roughly from the late 1990s, is a result of both China's unprecedented quest for WCUs and revolutionary massification of higher education system. The Chinese University 3.0 is unusual in the fact that it has taken on WCUs, massification, and internationalization over the same decade since the late 1990s. A closer examination of the triple processes and their symbolic and cultural impact enables a more comprehensive understanding of these phenomena and their policy implications.

2.4.1 The Ideological Rationale

There are several national ideologies that have served as the driving forces for China's changing landscape of higher education in general and the emerging Chinese University 3.0 in particular. First and foremost, higher education has been traditionally valued in China as a key instrument for individual and national development, first elaborated by classical Confucianism (Li 1998; Li and Hayhoe 2012). Such a Confucian value becomes emergent and more prominent for China in the new context of globalization.

Second, the Chinese had been always proud of their long civilization and national achievement, but in the nineteenth to twentieth centuries China lagged behind Western emerging superpowers, which colonized Hong Kong, Macao and Taiwan and some of territories in Northeastern provinces, Shanghai, Tianjin and Shandon, etc. To fight for its revitalization, especially against the Japanese invasion in the 1930s–1940s, China developed a strong mentality of catch-up and global competitiveness, which has served as a state-led, collectively recognized ideology for national survival and modernity under the accelerating pressure of colonialism and globalization. Additionally, China's quest for WCUs and massification of higher education has served as convenient political tools, supported by modernization theory and human capital theory.

2.4.2 The WCU Movement

The most notable agendas of building WCUs include Projects 211 and 985. In 1993, Project 211 was placed on the national policy table in the Guidelines for the Reform and Development of Education in China (The Communist Party of China Central Committee [CPCCC] and the State Council 1993). Formally starting in 1995, this national initiative aims to improve the quality of teaching, research and administration of universities, and make some of them world-class. It provides developmental support in three major areas: overall infrastructure and faculty in selected institutions, meaning funding for both hardware and software; key disciplinary areas in a wider range of institutions that respond to the demands of socioeconomic development; and public service systems such as the development of national data bases for education and research. The project has set up special funds to use solely for its tasks, and universities are encouraged to first apply for participation by submitting a plan that is rigorously evaluated. By 2011, the project had finished three phases (1996–2000, 2001–2006 and 2007–2011), with a total of 112 universities and 821 key disciplines selected, three national public service systems constructed, and the fourth phase (2012-present) is still underway.

Few years later the Chinese government launched Project 985, on the occasion of Peking University's centennial celebration in May 1998, as reflected in the project title. The Action Plan for Educational Revitalization in the Twenty-first Century (MOE 1998) laid out a straightforward pathway to build a few WCUs and world-class academic programs by the 2010s. Its first phase was implemented from 1999 to 2004; the original nine institutions grew to a total of 34. Peking and Tsinghua Universities received a total of 280 million US dollars; the others received less national funding, but benefited from revenue and support from their municipal or provincial governments. The second phase began in 2004, with five more universities finding their way into the elite club. Project 985's strategy is to facilitate a great leap forward in building a limited number of world-class universities, with a huge public investment from both the central and local governments.

Most recently, Projects 211 and 985 have been streamlined by a comprehensive, national master plan for a new wave of the WCU movement. The Master Promotion Plan of Building World-class Universities and Disciplines promulgated by the State Council (2015) aims to ambitiously build China as a superpower in higher education with sufficient top universities and disciplines in the world by the mid-twenty-first century. More importantly, China has constantly committed to its own cultural heritage of higher education for these national initiatives, as shown in the new Master Promotion Plan of Building WCUs in 2015.

The 2015 Academic Ranking of World Universities by Shanghai Jiaotong University shows that there are seven Chinese universities ranked in the top 200 world universities, while none of them was enlisted ten years ago. Additionally, mainland universities have been continuously moving up their ranks in the Greater China Region (Hong Kong, Macao, Mainland and Taiwan) over the past four years since 201, according to the same Shanghai Jiaotong Ranking. More importantly, the research capacity of Chinese universities has grown remarkably. For example,

China's world share of SSCI publications has increased from 0.01 % in 1978 to 0.67 % in 2007, with more than half of them were published in the past decade (Liu and Liu 2009), mainly due to the accelerated investment in terms of funding and staffing in Chinese universities.

2.4.3 The Massification Initiative

Coupled with Projects 211 and 985, China has also started the radical massification process of its higher education system since the late 1990s, which has made the country "the largest national higher education system in the world" since 2003 (The UNESCO 2003, June 23–25, p. 8). The total enrollment of students in higher education institutions jumped from 3.6 million in 1991 to 34.6 million in 2013, and the gross enrollment rate increased from 3.5 % in 1991 to 34.5 % in 2013 (MOE 1992, 2014). The massification of higher education in China, spurred in 1999, is both revolutionary and unprecedented in the history of Chinese universities and their modern transformations.

In 1991 only 3.5 % of the relevant age group between 18 and 22 benefited from any form of higher education in China. This percentage reached 7.2 % in 1995, 10.5 % in 1999, and around 37.5 % in 2014 with 35.6 million students enrolled. The average institutional size of regular higher education institutions has almost quadrupled from 2381 students in 1993 to 9995 students in 2014. These outcomes are incredible achievements for a country like China that has the largest population in the world. In addition, after decades of closedown and reentry into the higher education scene in the early 1980s, private higher education institutions have been growing rapidly since the late 1990s. In 2004, the Ministry of Education (MOE) started to publicize national data for private higher education institutions. According to the MOE's *Annual Statistical Communiqué 2003–2014*, *Minban* colleges and universities increased from 173 in 2003 to 728 in 2014, enrolling a total number of 5.9 million students.

2.4.4 The Internationalization Agenda

Alongside the two initiatives mentioned earlier, Chinese universities have also endeavored to rapidly internationalize themselves in multiple ways. By 2012, there were a total of 328,330 international students from 200 countries and regions studying in Chinese universities (The Editorial Board of *the People's Republic of China Yearbook* 1999, p. 640), 662 % from 43,084 from 164 countries and regions in 1998 (The Editorial Board of *the People's Republic of China Yearbook* 1999, p. 1085).

An excellent example is the rapid spread of the Confucius Institutes (CIs) and Classrooms (CCs) around the world. A demand-led response modality had enabled hundreds of Chinese universities, many enlisted in Project 211 or 985, to partner

with their global counterparts to set up the CIs and CCs worldwide, the largest project of international collaboration in language and cultural exchange in human history. Within just one decade, 500 CIs were opened in 125 countries, with 46 in Africa, 110 in Asia, 169 in Europe, 18 in Oceania, and 157 in the Americas, registering over 1.9 million local learners by the end of 2015 (Hanban n.d.). The new way of the collaboration with their overseas partners through CIs is a milestone to Chinese universities, which signals that they are in an unparalleled stage that goes global in real sense (Li and Tian 2015).

2.5 Core Values and Features of the Chinese University 3.0

The initial outcomes of these national endeavors appear very positive, having raised universities' overall quality while expanded their size and outreach, as evidenced recently in the large-scale studies on China's move to mass higher education (Hayhoe et al. 2011b) and on China's rising research universities (Rhoads et al. 2014). They signal the emergence of the Chinese University 3.0 from its earlier versions. There are at least four core values and features that are evident at this stage: self-mastery, intellectual freedom, humanist (*Zhi-Xing*) mission, and institutional diversity (*He'er Butong*), as discussed in the following, if reflected from a macro, historical, and cultural lens on the trajectory and ongoing development of Chinese universities. I will use Weber's (1948) concept of the ideal type to identify these core values and features in contrast to those that are traditional to Western universities.

2.5.1 Self-Mastery and Intellectual Freedom

The English historian Hastings Rashdall (1895) observed that the twin characteristics of institutional autonomy and academic freedom were the key to the medieval universities in Europe. In her widely cited volume, Hayhoe (1996) argues that none of them fits the Chinese context and that "there was no institution in Chinese tradition that could accurately be called a university" (p. 10). China's classical scholarly institutions never had the full protection of a legal charter or the right to own property; rather they were an arm of the imperial bureaucracy, which administered the civil service examinations and selected the most knowledgeable and talented scholars to serve as officials. At the opposite pole were private academies in remote rural areas which enjoyed considerable autonomy but were not protected by law and were sometimes co-opted into imperial service. She then proposes that the terms "self-mastery" and "intellectual freedom" in the Chinese context may be seen as parallel concepts to autonomy and academic freedom in Western tradition (Hayhoe 1996, 2001).

The fundamental difference of higher education institutions between the West and China, represented in parallel by autonomy and self-mastery and academic freedom and intellectual freedom, is largely due to their contrasting origins with dissimilar cultural and epistemological traditions, which will be detailed later in this chapter. Briefly here, Western universities have original roots in churches in medieval times, and their main activities of teaching and learning were focused initially for religious purposes. Quite differently, Chinese universities were established at the very beginning in history for political purposes, and they were set up and constructed primarily to serve, and oftentimes to guide, state interests. Such a dichotomous nature of the two types has shaped their historical development fundamentally and distinctly, in terms of institutional mission, educational and learning process, curriculum and standards, teacher-student relationships, etc. It has made Chinese universities never a true Western concept of the "university," though nowadays the Western concept is widely accepted and used to refer to Chinese universities.

In striking contrast with the tradition of autonomy in Western universities, and highly related to its own tradition, the Chinese University 3.0 has demonstrated a closer, more integrated relationship with the government. It has served and supported the state's interests in every way possible, including cultivating scholar-officials for political leadership and catering for national projects. It is more receptive and responsive to government initiative and intervention and lacks autonomy in the Western sense. At the same time it has been highly responsible for its own survival and development, in terms of its internal administration. Thus, the term self-mastery captures the spirit of the institution better than autonomy, a concept that conveys a sense of political or legal independence in Chinese (Hayhoe 2001; Hayhoe and Zhong 2001). Illustrating this self-mastery are the initiatives of individual scholars and institutions that stimulated the national drive to reach world-class status (Li 2012). On another level, the self-mastery of the Chinese University 3.0 may have some parallels with China's stance on self-determination, one of the three theorems in the Beijing Consensus which Ramo (2004) has related to the Chinese development model.

On the other hand, traditional Chinese scholar-officials probably had a higher degree of intellectual authority than was seen in Europe, including the right to admonish the Emperor himself. Meanwhile, scholars who withdrew from government and founded private academies exercised an intellectual freedom that went beyond the parameters of the theoretical and specialist academic knowledge associated with the concept of academic freedom in nineteenth-century Europe. They had a very high sense of both moral and sociopolitical responsibilities, and they believed the most valued knowledge could only be fully demonstrated in its application to personal and social actions for the highest public good. It contrasts with Newman's great idea of "knowledge as its own end" as the first principle of the university (Newman 1859, pp. 99–123).

Today, universities are controlled, both directly and indirectly, by the state (government) or the market, or both, like the American multiversities (Kerr 1963), the Japanese public universities (Kaneko 2009), and the Chinese University 3.0.

Perhaps the question of greatest interest here is which model better lends itself to the creation of WCUs, and which can better stand up to the negative pressures coming from globalization of nothing (Ritzer 2003). Some scholars contend that almost all universities follow institutional patterns derived from Western models (Altbach 1992) and that all Asian universities are based on European academic models and traditions (Altbach and Selvaratnam 1989). These assertions are echoed by some Chinese scholars who deny the continued influence of ancient Chinese institutions (Ding 2001; 2004). However, the Chinese University 3.0 may be exceptional, demonstrating that it reflects persisting characteristics of China's scholarly tradition, though it has been strongly influenced by various Western models over the twentieth century.

*2.5.2 Humanist (*Zhi-Xing*) Mission*

The Chinese University 3.0 owes to its predecessors that were centered on Confucian ethics – *Zhi-Xing*, a third core value and feature of the Chinese University 3.0. The *Zhi-Xing* or humanist mission of higher education and learning is deeply shaped by Confucian epistemology and Chinese ways of higher learning and education:

> Therefore, the way of higher learning is to cultivate people and to nurture their ways of life, converting those close by gracefully and winning over those at a distance. (*Xueji*, 5)[2]

Wang Yangming (1472–1529), a neo-Confucian in the Ming Dynasty (1368–1628), explicitly proposed *Zhi-Xing Heyi* (Wang n.d., p. 3) during his directorship of the well-known Guiyang Shuyuan. *Zhi* literally refers to (ethical) knowing or learning, *Xing* means (ethical) doing or practicing, and *Heyi* dictates their oneness:

> Knowing is the genesis of doing, and doing is the corollary of knowing: Learning to be a sage has only one Kungfu – knowing and doing is one instead of two that can be separated. (Wang n.d., p. 9)

It must be noted that the purpose of both *Zhi* and *Xing* lies in Confucian humanism: "to let one's innate virtue shine forth, to renew the people, and to rest in the highest good" (*The Great Learning* n.d., 1.1). Through the interwoven Eight Steps of Learning (*The Great Learning* n.d., 1.5), the *Zhi-Xing* mission begins with the investigation of things and extension of knowledge, goes through self-cultivation of personhood and the care of family, and ends up with the governance of the state and

[2] *Xueji* (*The Theory of Education*) is a classical Confucian essay from *Liji* (*The Book of Rites*) compiled two thousand years ago. The translation here is mainly mine, with adaptations from the following references: Chai, C., & Chai, W. (1965, trans. & eds.). *The humanist way in ancient China: Essential works of Confucianism*. New York: Bantam Books, Inc.; Gao, S. L. (2005). *Xueji yanjiu* [*A study of Xueji*]. Beijing: People's Education Press; Gao, S. L. (1982). *Xueji pingzhu* [*An annotation of Xueji*]. Beijing: People's Education Press; Wong, W. S. (1976). *The Hsüeh Chi, an old Chinese document on education. History of Education Quarterly*, 16 (2), 187–193; and Xu, D., & McEwan, H. (2016). *Universal principles for teaching and learning: Xue Ji in the 21st century*. Albany, NY: SUNY Press.

the making of a peaceful world for all people, all centered on the cultivation of individual morality for social development (Li and Hayhoe 2012). These Eight Steps are not exclusive to investigation into the natural world, but actually base the interactive and progressive process of higher learning and education first on the exploration of nature and the self, which are then expanded into moral perfection in terms of the growth of personhood, deontological capacity, and ethical wisdom for a benevolent, free, and equitable social world (Li 2015).

The humanistic orientation of Confucian higher learning and education has been carried forward to modern times by later Confucian scholars such as Ch'ien Mu (1895–1990), who anticipated a new Chinese model of the university. In his popular article on *The Ideal of the University*, Ch'ien (1943) criticized the popularity of commercial and Western orientations of university education in China driven by capitalism and colonialism and advocated humanistic emancipation through forms of higher education that stimulated Confucian ethics. His pursuit of moral cultivation has been carried on by his disciples (Yu 1974), and the Chinese University 3.0 continues to practice such a humanistic value with the rapid spread of Confucius Institutes all over the world. This Confucian value and feature was put forward 2000 years ago and so fundamentally shaped contemporary Chinese universities that they are typified as the Confucian or post-Confucian model (Marginson 2011, 2013).[3]

In the European context, academic freedom has generally been associated with theoretical and specialist fields of knowledge, allowing for absolute freedom in the search for understanding in the natural and social worlds, but less freedom in the application of that understanding to political or social activism. By contrast, intellectual freedom of the Chinese University 3.0 is deeply rooted in China's epistemological traditions, which maintained a commitment to a certain holism in knowing and insisted on the demonstration of truth in sociopolitical action, rather than through logical argumentation or experimentation. Confucius believed that knowledge is to be used for ethical, moral, and political purposes, with the application moving from personal cultivation, to family and social relationships, and to sociopolitical action (Chen 1990; Li 1998, 2009; Li and Hayhoe 2012), rather than to support the exploration of scientific facts or religious beliefs. Since the Chinese University 1.0, this tradition of integrating ethics-centered knowing into social practice, or the unity of knowing (knowledge) and action, has been incorporated into the humanist mission of Chinese universities. From classroom learning to social applications, the *Four Books and Five Classics* formed the core contents for China's civil service examinations (Hayhoe and Li 2010). Knowledge about arithmetic, geometry, logic, engineering, agriculture, and law was well developed and applied in a range of state projects, yet it did not form the core of the curriculum, as did the trivium and quadrivium in medieval European universities.

[3]The term of Confucian or post-Confucian model is excellent in capturing the core feature of Chinese universities, but it seems inapplicable to fully reflect the bigger picture of the Chinese University 3.0 which is more inclusive in a global age.

In medieval Europe, theology was viewed as "queen of the sciences," responsible for guiding all other fields of knowledge, but the Chinese had no clear hierarchy among subject areas. Rather, all knowledge was viewed as pragmatic, and non-religious, focused on political ethics. In Europe, the Kantian distinction between facts and values liberated the sciences and social sciences from theological restrictions, facilitating the academic freedom that has characterized modern Western universities, but China developed quite differently. Chinese epistemology fostered a situation where scholars have chosen either the intellectual authority accorded to them in their role as scholar officials or the intellectual freedom they could gain through periods of withdrawal into the private world of the family or local academy. The fact that knowledge must always be demonstrated in action for the public good has often led scholars to face dangers, particularly in periods of national decline or social conflict, when they were likely to contradict those in power.

It is worth noting that the Chinese tradition of written civil service examinations to select an elite to rule and the idea of integrating higher education institutions within the imperial bureaucracy were admired by European Jesuits and philosophers like Voltaire and Leibniz. How much did these values influence the emergence of what Clark (1983) calls the "continental model" of the university and what Neave (2001) terms the "Roman model" in eighteenth-century Europe? Researchers have not answered this question. Still, the parallels with Chinese traditional patterns are obvious: higher education systems that are part of a modern state apparatus, with professors as civil servants, and autonomy protected by the concept of legal homogeneity, rather than legal personhood or the university's ownership of property. Academic freedom, by contrast, has remained tied to epistemological traditions of rationalism in the European context, while American pragmatism has spawned a somewhat broader concept, more closely allied to the notion of intellectual freedom in the Chinese context (Hayhoe 2001, pp. 331–336).

*2.5.3 Institutional Diversity (*He'er Butong*)*

The Chinese University 3.0 carries its earlier tradition in actively engaging in ambitious projects of the state and controlled by the government. Furthermore, Chinese universities have tended to be highly hierarchical, stratified, and meritocratic, with only a few outstanding public universities at the top, like the Chinese University 1.0 in ancient China. Institutional hierarchy and stratification have also been widely observed in other Confucian heritage societies, including Japan, Korea, Taiwan, and Singapore, where the top research universities are likely to be public with global standing.

Despite being hierarchical, stratified, and meritocratic, the Chinese University 3.0 inherits from its predecessors and continues to develop itself as an open, diverse system, which is hybridized with and diversified by the Chinese University 1.0 and 2.0 and Western models (including the Soviet model). As mentioned earlier, the Chinese University 1.0 was a system inclusive to various types of higher education institutions, structured by both public and private and both comprehensive and

specialized. In terms of curricular design, Confucian classics were never the sole source of learning, and arts, Buddhism, Taoism, mathematics, martial arts, medicine, laws and even natural sciences were all among them (Sun 2009).

Comparatively speaking, the Chinese University 2.0 demonstrated even more institutional diversity in terms of the new addition of Christian universities represented by Aurora University (1903) in Shanghai and the Catholic University of Peking (1925), both established by Father Joseph Ma Xiangbo (Hayhoe 1996), and such well-known institutions as Yenching University (1919) in Peiping and St. John's University (1879) in Shanghai (Li 2014; Lutz 1971). Christian universities have by nature introduced and embodied Western models of higher education in the greater China region, in terms of institutional autonomy and governance, curriculum, standards and assessment, financing, approaches to pedagogy, and campus lifestyle. They also promoted a diverse scholarly culture that embraced religion, the humanities, the social sciences, and the sciences (Li 2014).

The institutional diversity has been a Confucian value of higher education, as Confucius always placed importance to harmony with diversity and tolerance as *He'er Butong* (*The Analects of Confucius* n.d., 13.23). The Confucian idea was further developed later as "all things being nourished together without hurting one another" and "all courses being pursued without being conflictual or mutually exclusive" by *The Doctrine of the Mean* (n.d., 30.3), one of the cornerstones of the Chinese University 1.0. It is in this sense that institutional diversity should be able to respect, include, encourage, and actualize a vast variety of pedagogical and spiritual beliefs and traditions, institutional forms and endeavors, as well as student backgrounds being favorable to the promotion of intercultural and cross-national understanding in a global age. These traditions have been continuously carried forward by the Chinese University 2.0.

In recent years, the Chinese government has started to re-work on its financing strategies for more even distribution of funding sources to all its institutions. In spite of the many mergers in the 1990s, the system has remained diverse, with polytechnic, normal, agricultural, vocational, and religious institutions maintaining their identity and contributions, many vocationally oriented institutions at the provincial and local level, and an increasing number of private universities that respond directly to social demand of higher learning. Additionally, the internationalization of Chinese universities, represented by the two-way flow of students and faculty going abroad and to China and the rapidly spreading international collaborations through Confucius Institutes all over the world since 2004, has vividly manifested the wide impact of institutional diversity in the global age.

2.6 Implications for Future

That the emerging Chinese University 3.0 is clearly characterized by its close connection to government, almost as a state facility or a part of governmental organization, suggests both advantages and disadvantages for its institutional development.

This can be seen in China's drive to create WCUs, and the Chinese experience may shed some light on the worldwide movement to build WCUs.

First, it is interesting to note that the classical, fundamental Chinese principle that all things being nourished together without hurting one another and that all courses being pursued without being conflictual or mutually exclusive (*The Doctrine of the Mean* n.d., 30.3) is reflected in the preservation of *He'er Butong* in the Chinese University 3.0 – rather than the homogenization around the model of the global research university that dominates the Anglo-American world of higher education. After a decade of massive massification and major support to create top institutions, the Chinese system has been open and diverse, maintaining its various types and levels of institutions and continuing to learn from other models (Hayhoe and Li 2012), mainly from those in Type A. The Chinese University 2.0 has evolved across the twentieth century, absorbing influences from the Japanese model in the 1890s, the European model in the 1910s, the American model in the 1920s, and the Soviet model in the 1950s (Hayhoe 1996). Beginning in the early 1980s, it faced marketization and privatization paved by neo-liberal ideology and has begun to build its global status from the late 1990s. Since then, the Chinese University 3.0 has probably experienced the best period of development in its entire modern history, in terms of national priority incentives and alternative global sources. It has an openness originating from the Confucian philosophical principle and pragmatism to learn from other models around the world, through trial and error, and its top echelon has the resources to develop world-class standards in teaching, research, and governance, to support China's rise in the twenty-first century.

On the other hand, the Chinese University 3.0 has maintained its institutional identity as an important part of the state system, even though the Higher Education Law of 1998 guarantees its status as a legal person. Independence is expressed in the initiatives of leaders and scholars who make specific choices for their institutions in terms of research orientation, curricular focus, or partner for merger. They do not see this as a matter of detaching themselves from the state, rather as seeking to serve the nation in ways that go beyond the limited vision of their political masters. Thus, the concept of self-mastery encapsulates its spirit better than autonomy or independence.

As for intellectual freedom, there are clear limitations on how far university scholars can go in criticizing their government. However, they will never be satisfied with a freedom that is associated only with pure theory or highly specialist knowledge. Rather, Chinese scholars and university leaders tend to have a strong sense of *Zhi-Xing* mission and a conviction that knowledge must be expressed in social action, even when that action may be judged as politically unacceptable in a particular time or place. By the same token, the action may be oriented toward supporting major state projects, such as the Opto-electronics Lab in Wuhan and its nearby Optics Valley (Hayhoe et al. 2011a, pp. 307–343).

With a governance pattern that is called the Presidential Responsibility System under the Guidance of the Communist Party, the CPC maintains close control over university faculty and student activities. Still, the fact that most universities derive more than half their income from student fees, research, and consulting demon-

strates the strong demand for accountability from students, faculty, and the wider community. Thus a civil society is beginning to assert itself, and it will be interesting to watch how this influences the national political system, given that nearly 35 % of young people are now involved in higher education. Nevertheless, the Chinese University 3.0 still has a lower level of intellectual freedom than its Japanese counterpart, and probably less autonomy, though that the Japanese university gained legal person status only in 2004.

Second, while the Chinese government has played a dominant role in providing for the building of WCUs, public resources have been mobilized and distributed quite effectively. This has enabled a few elite institutions to participate actively in the global community, while the huge demands for massification are absorbed by lower-level institutions that prepare students for the local or regional job market. This is probably the best strategy for a developing country with limited resources but a strong dynastic tradition. The highly centralized nature of the Chinese regime, coupled with a meritocratic ethos which has led the CPC to search for outstanding talent to fill senior government positions at all levels, has made implementation fairly smooth. The Chinese approach of neo-authoritarianism has demonstrated that modernization is possible through authoritarian rule (Petracca and Xiong 1990). But how long this form can be sustainable and support China's rise on the global stage is an open question, as argued in a recent book by a group of Chinese scholars (Pan 2009). Though the Chinese development model probably cannot be replicated elsewhere (Ramo 2004), China's experience in the quest for WCUs may be a valuable reference point for developing countries seeking to improve their global status.

Third, it is important to remember that in addition to the drive to develop WCUs, China has also had a massification initiative which has radically expanded higher education provision since the late 1990s. That is very different from places like South Korea, Japan, and Taiwan, where massification occurred earlier, and was followed only recently by projects such as "Brain Korea" and the corporatization of Japanese imperial universities. China has adopted a two-pronged ideology of development, with neo-authoritarianism for political control (Huntington 1991) and neoliberalism as a pragmatic route to decentralization and marketization. While the convergence of these two discourses makes for some conflicts and contradictions, the economic returns from the rapid massification of higher education, with the highest student fees in the lower vocational and private programs, have greatly benefited individual institutions. This means that the budget for building WCUs can be prioritized for just a few top research institutions. At the same time, the expanded higher education system has also protected *He'er Butong* and nurtured alternative types of institutions at various levels, such as normal, agricultural, and polytechnic universities in addition to the comprehensive universities that come closest to the international model of a global research university.

Finally, the efforts of the Chinese University 3.0 have been fraught with contradictions, challenges, and threats. One widely observed problem is that quality has been sacrificed to the massification process, even in some elite institutions. Another serious concern is about academic corruption in Chinese universities. It has obvious

negative effects on a society, leading to the deterioration of professional skills and achievement motivation, economic and ethical losses, and social inequality (Weidman and Enkhjargal 2008). Unfortunately, since the 1990s there is clear evidence of misconduct in various forms, e.g., false qualifications and achievements, manipulating research data, and academic plagiarism. China has increasingly adopted an instrumentalist, quantified approach to evaluating individual or institutional performance in education and research, with even greater intensity than elsewhere. Those universities listed in Project 211 or 985 face greatest pressures – both management and the public expect faster academic deliverables and other outputs (Li 2016a, forthcoming) – and some scholars compromise to find shortcuts to survival and promotion. It will be interesting to see how China can benefit from the experience of societies such as the United States, Hong Kong, and Singapore, where effective mechanisms have been established to curb corruption.

The third threat is from the officialdom-centered style of administration that is entrenched in some Chinese universities, an offshoot of China's bureaucratic system that traditionally gave priority to government officials (Li 2016b, forthcoming). Thus, political games have been common among individuals and institutions. Given this cultural tradition, leaders and administrators in Chinese universities are viewed as having a higher or more authoritative status on campus and tend to enjoy a range of economic and political privileges. Professors and students are often in disadvantaged positions, having to struggle for respect and status by taking up official positions themselves. On the other hand, university presidents and top scientists must also bow to their senior leaders and administrators at the provincial bureau or the national Ministry of Education for survival and promotion. An article in *Science* (Shi and Rao 2010) showed how a few top bureaucrats and their favorite researchers manipulate or "secretly trade" funding for research under the table. The officialdom-centered bureaucracy poses serious challenges for the Chinese University 3.0, since it easily falls prey to corruption, nepotism, favoritism, and hierarchism. In its most recent national guidelines for educational reform and development, the State Council (2010) formally placed de-bureaucratization, de-policalization, and deregulation on the government agenda as the right direction to solve this chronic problem.

2.7 Conclusion

In conceptualizing WCUs, massification and internationalization of higher education system, the Chinese have shown themselves to be open to learning from attractive features of the historically dominant Western models of the university, but indigenous views on scholarship and scholarly institutions remain strong. The Chinese government has also been open to considering various approaches to the latest development of its higher education system, which can be conceptualized as the Chinese University 3.0. Thus China's experience has shown that a strong state with a developmental agenda can make excellent use of universities to enhance its

national position in the global arena, without necessarily imposing a national or globally homogenized format on them. Along with China's rise as a global superpower, the Chinese University 3.0 is emerging, as open, diverse, and dynamic institutions, seeking excellence in knowledge production and application, and able to serve the nation and the globe while also aspiring for to its own higher and longer-term visions (Li and Hayhoe 2013).

Concern has been expressed that the distinctive cultural frameworks of different localities should not be surrendered to the homogeneity of international standardization in the pursuit of achieving world-class higher education (Niland 2000). In this sense, the successful rise of the Chinese University 3.0 will depend on its capacity to balance its cultural heritage with the need to enhance quality and renew the institution as it seeks to meet new societal demands, locally, regionally, and globally. More important, the Chinese University 3.0 should never forget its soul, in what might be described as a democratic mission rooted in the classical Confucian tradition ultimately for the highest individual and public good. One Western scholar has put it in a different but equally appealing way: "Education should never become an assembly line. Once it does, you may have a certain level of production, but you will never get the volume of creative thinkers that make democratic society work" (Simmons 2003, p. x).

China's Blueprint for Educational Reform and Development 2010–2020 (State Council 2010) and its new Master Promotion Plan of Building World-class Universities and Disciplines (State Council, 2015) both carry forward the ambition to build WCUs, and these drives have created WCUs in China. In 2015 scholars in the Mainland have started to win Nobel Prizes (Youyou Tu – Facts 2015), and it will be foreseeable that in the next few decades China will become a research superpower and can boast of sustainable WCUs in the sense of globally recognized excellence in teaching and learning, knowledge exploration, sociopolitical actions, and governance. In her lecture on December 7th 2015, Youyou Tu has indicated that the traditional Chinese medicine is a gift to the world (Youyou Tu – Nobel Lecture 2015). Similarly, when China has proven itself a successful model of development in many areas, not only its economy, the Chinese University 3.0 may also emerge as a gift to the world, a renewed model capable of setting new global examples for world-class higher education that may be appropriate to the needs of the later twenty-first century. While some still doubt that Asian universities are based on their own heritages (Altbach 1992), the Chinese University 3.0 is exceptional, and it reflects key characteristics of China's indigenous scholarly tradition.

It is widely recognized that European universities and the immediate products of their activity constituted one of the great intellectual achievements of the Middle Ages (Rashdall 1895). Even though the emerging Chinese University 3.0 is still far from achieving world-class standing, its rise is likely to constitute another great achievement of human history, together with the various models developed in the Western world and other parts of the globe. It is yet to be seen how its core features of self-mastery and intellectual freedom, in addition to sociopolitical mission and institutional diversity, will serve to foster vibrant, alternative societal development and contribute to a global dialogue among civilizations in the future. However a

look back at China's significant contributions to human development over the lengthy historical period that preceded Europe's Scientific Revolution starting in the sixteenth century, as shown by Joseph Needham (1954), provides a sense of hope and anticipation.

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Chapter 3
Curriculum Reform and Education Policy Borrowing in China: Towards a Hybrid Model of Teaching

Charlene Tan and Vicente Reyes

Abstract This chapter critically discusses the development and application of a model of education in China by focussing on recent curriculum reform in the country. Since the 1980s, Mainland China has launched a series of ambitious education reforms in its effort to revamp its basic education and prepare its graduates for the challenges of the twenty-first century. Major changes are evident in the school management, curriculum, pedagogy and assessment in Shanghai schools. Drawing upon Phillips and Ochs (2003)' four stages of education policy borrowing, this article analyses the curriculum reform in China and argues that a hybrid model of education exists in China that combines foreign and local ideas and practices. Rather than wholesale policy borrowing from the West, the foreign ideas and practices are being internalised and indigenised in China as they interact with local traditions, values, ways of doing and actors.

3.1 Introduction

In 2009, education systems worldwide were greeted with the stunning news that Shanghai topped the Programme for International Student Assessment or PISA. Scholars and practitioners referred to Shanghai's breakthrough as "PISA-shock" (Sellar and Lingard 2013, p. 465). Quite suddenly, attention on education quality seemed to have shifted from a Eurocentric perspective, dominated by the stranglehold of the much-envied Finnish education system, towards Asia – and more specifically – a China gaze. In the 2013 PISA, the spectacular performance of Shanghai was once again repeated. Just like 2009, Shanghai dominated test results

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in Mathematics, Reading and Science. China-based academics divulged what they believed was the secret to Shanghai's success:

> Prof Kong Lingshuai of the College of Education at Shanghai Normal University has studied the city's PISA successes. He says that the secret is a mix of "traditional elements and modern elements". The former relate to the high expectations of "tiger" parents, and a belief instilled in Chinese children from a young age that effort is crucial to gaining a good education. (Phillips 2013, p. 2)

It seems then that the Shanghai experience presents an intriguing model: a mix of "traditional and modern elements". But what exactly are the ingredients that are mixed in this new formula? And what, if any, is the rationale or framework that the Shanghai education authorities pursue in promulgating this novel paradigm? Since the 1980s, Mainland China has launched a series of ambitious education reforms in its effort to revamp its basic education and prepare its graduates for the challenges of the twenty-first century. Major changes are evident in the school management, curriculum, pedagogy and assessment in Chinese schools.

Drawing upon Phillips and Ochs (2003)' four stages of education policy borrowing, this article analyses curriculum reform in China and argues that a hybrid model of teaching has developed in China. The focus here is on the new curriculum reform that was officially launched at the turn of the new millennium. The chapter begins by providing an overview of the curriculum reform in Shanghai. Next, it delineates the theoretical framework, followed by a discussion of the existence of a hybrid model of teaching developed by educators in the country. The last section highlights a key challenge this model faces in an exam-oriented culture in China that reflects the on-going difficulty faced by Chinese policymakers and educators in implementing curriculum reform.

3.2 Overview of the New Curriculum Reform in China

The current education reform in China (New Curriculum Reform), launched officially in 2001, is encapsulated by the slogan 'quality-oriented education' (*suzhi jiaoyu*) (Ministry of Education 2001). Emphasising this slogan, the former president Hu Jintao stated that "the main strategy for educational reform and development is to comprehensively implement quality-oriented education" and former premier Wen Jiabao echoed the need for China to "comprehensively promote quality-oriented education" (both cited in Shanghai Academy of Educational Sciences 2010). However, it remains unclear what 'quality-oriented education' means as it is not defined by the authority in any official documents; one way to look at it is to contrast it with the traditional 'exam-oriented education' (*yingshi jiaoyu*) that centres on text-learning, didactic teaching and pen-and-paper assessment. A quality-oriented education signals China's focus on reforming its educational system against the backdrop of economic globalisation.

To achieve the vision of 'quality-oriented education', the Chinese government has introduced drastic changes to the curriculum, pedagogy and assessment in China,

with variations across provinces and municipalities (Tan 2012; Tan and Chua 2015). First, the curriculum includes not just the usual exam subjects but new subjects, programmes and activities conducted both inside and outside the school to meet the students' different interests and learning abilities. Secondly, greater school autonomy is accompanying the change in curriculum to ensure that this new approach is successful. The Chinese government has adopted a more decentralised and tripartite system in which a series of measures and structures are implemented for schools in different states and provinces, and these schools hold responsiblity to customise their curriculum for their individual needs (Deng 2011). Prior to the 1990s, the curriculum was highly centralised and all schools had to uniformly implement the national curriculum that comprised compulsory school subjects stipulated by the Ministry of Education. However, the early 1990s saw the addition of a locality-based curriculum that consisted of school subjects designed by the respective provincial/prefecture/city authorities. A further change was made in 2001 when 'school-based curriculum' was introduced nation-wide as part of a "distributed, three-tiered structure" (Ministry of Education 2001). In other words, Chinese schools now implement a three-tiered structure or three types of curricula: the national curriculum, locality-based curriculum, and school-based curriculum where schools are tasked to conceptualise and offer their own subjects, programmes and activities. This means that more roles and responsibilities are given to school principals to launch new courses on extra-curricular activities, community projects and research by collaborating with museums, social centres, research centres, universities and institutions of higher learning.

Another key area of change is pedagogy. A teacher-centred approach should be replaced by a new form of learning that promotes student-centred learning and the development of personal autonomy and collaboration. Examples of learner-centred pedagogies are small-group discussion, individual project work, debate and fieldwork. Complementing the reforms in curriculum and pedagogy is the mode of assessment. While summative and written exams remain relevant for China, the authorities expect schools to introduce formative and alternative assessments. Examples of innovative assessment modes include experiments, oral presentations, poster displays, forums and seminars and student publications. Overall, we can identify new and multiple concepts of curriculum in the reform in China, shifting from 'curriculum' as synonymous with topics listed in the syllabus to be tested in exams in the past, to 'curriculum' as classroom engagement, innovation, creativity, inquiry and community services, and so on.

3.3 Four Stages of Education Policy Borrowing in China

In terms of theoretical framework, this chapter draws upon Phillips and Ochs (2003, 2004)' four stages of education policy borrowing, namely (1) Cross-national attraction, (2) Decision, (3) Implementation, and (4) Internalisation/Indigenisation. This framework has been adopted as we believe that it offers a useful reference for

us to explore the developments, issues and challenges for China in its process of curriculum reform. Although the framework refers to 'education policy', this article shall not discuss the specific policies in China that correspond to each stage, but will instead give an overview of the curriculum reform with a focus on what we call a hybrid model of teaching.

It should be pointed out that educational policy borrowing is a highly-contested concept. One school of thought believes that what is known as policy borrowing is actually policy appropriation which is nothing more than "inert borrowing from elsewhere" (Lingard 2010, p. 144). Another school of thought argues that policy borrowing is mimicking through comparisons with what others have already achieved, also known as benchmarking (Lundvall and Tomlinson 2002). For this particular inquiry, the lens that would be adopted would be Phillips and Ochs' educational policy borrowing model that posits four phases: (1) Cross-national attraction; (2) Decision; (3) Implementation and (4) Internalisation/Indigenisation (D. Phillips and Ochs 2004). Notwithstanding criticisms about the rigid linearity of the model (Reyes 2015), reviewing the Shanghai reform experience from this lens provides analytical illumination. The four stages of Phillips and Ochs' framework will be elaborated in the next section.

3.3.1 Cross National Attraction

Phillips and Ochs posit that the starting stage of educational policy borrowing is triggered by several types of impetuses that all fall within the notion of cross national attraction. In the case of China, commentators have long argued that learning from the west, for example through the use of western advisers, has been an important pillar of its development strategy (Spence 1980). Starting from the open door policy which was initiated in 1978 (Naughton 1993), its champion, Deng Xiaoping, cited the need for laggard China to "learn from abroad, especially from the developed countries and with particular emphasis on science and technology and on management techniques" (Christensen et al. 2008, p. 357). This inquiry argues that an impetus that continues to drive China's attraction to the west, particularly in terms of education, is its ethos of pragmatism.

Cross national attraction as a precursor to educational policy borrowing is, of course, not unique to China. South Korea's turn to the west, historically seen as "a national project to strengthen and develop the country for national survival" hinged on "the role of education in creating modern citizens capable of taking charge of Korea's destiny" (Sorensen 1994, p. 14). In the case of Korea, its modernisation project started much earlier than the People's Republic of China (PRC), as its seeds were sown as early as the 1920s nationalist movements (Sorensen 1994). Taiwan Province of China also undertook a deliberate turn, "anchored on Chinese culture and Western economic rationalism" (Chou and Ching 2012, p. 39) after it conducted a comprehensive "review of the education system" in the mid-1990s, that saw the establishment of "links and academic exchanges with universities overseas" (Mok 2003, p. 121).

3.3.2 Decision

The process of decision-making is the next step in the educational policy borrowing model. Philipps and Och posit that after cross-national attraction has sunk in, nations (or individual actors for that matter) undertake decisions in regard to adopting imported educational policies. In the case of China, a look at its evolving English Language Teaching (ELT) policy provides an example of a continuing decision-making process in relation to borrowing ELT principles. A specific example of this can be seen in China's Ministry of Education document published in 2001 entitled "the Ministry of Education Guidelines for Vigorously Promoting the Teaching of English in Primary Schools," that provides a specific timeline indicating the nation's decision to embrace more intensive English Language Teaching (Hu 2005, p. 359). For the last quarter century, experts on English language policy adoption in China have argued that ELT policy decisions have primarily been "driven by the perceived importance of English to national modernization," and a powerful "desire to catch up with developed countries" characterised by "a pressing sense of urgency" (ibid., p. 12). Driven by the nation's "pragmatic ethos" a concrete decision that has been made, which has significantly altered the provision of ELT at the national level was the expansion of "English at the secondary level" (ibid., p. 10).

3.3.3 Implementation

Once a clear decision has been made, educational policy borrowing moves on to the implementation phase – a part of the policy borrowing model that is fraught with complexities. In the case of China which is the biggest education system in the world, the implementation takes place at all three levels: national, provincial/prefecture/city and school. A perusal of China's educational reform efforts as the embodiment of its decision to embrace quality-oriented education can be summarised as attempts to break up its hugely centralised bureaucracy through the process of decentralisation. The official edict that contained the implementing guidelines for decentralisation is captured in the Program for China's Educational Reform and Development" issued by the State Council (State Education Commission (SEC) 1994). More specifically, the implementation of decentralisation focused on three specific areas: fiscal reforms (i.e. budgeting and subsidies), management of schools and curriculum reform (Hawkins 2000). As stated earlier, the implementation of borrowed educational policy (i.e. decentralisation) is highly-complex. In the case of China's decentralisation efforts, the consensus seems to be that "decentralisation seems to be working in some selected areas and not working in others" (Hawkins 2000, p. 453). This chapter argues that within the huge and highly disparate education system in China, Shanghai stands as a unique example of how Chinese-style decentralisation seems to be working. Investigating the experience of Shanghai, particularly the institutionalisation of its own curriculum, teaching and materials

office in relation to language policy, supports the argument of successful implementation:

> The curricular reform effort did not take the form of a new unified curriculum for all schools nationwide but consisted in gradual devolution of decision-making in curricular matters to selected regions. This departure from the usual practice of centrally controlled curricular decision-making followed from the guiding principles of decentralization and diversification promulgated in the 1985 educational reform and reflected greater attention to problems with ELT arising from the size and diversity of the country…In 1988, Shanghai set up its Curriculum and Teaching Materials Reform Commission (CTMRC) and started its curricular reform. (Hu 2005, p. 13)

The success of Shanghai's decentralisation mode in the implementation phase of educational policy borrowing is foreshadowed in China's Special Administrative Region (SAR) of Hong Kong which started implementing changes during the post-handover era. Similar to Shanghai, the implementation approach taken in Hong Kong focuses on neoliberal capitalist modes of efficiency, effectiveness and economy. This is clearly evident, particularly in regards to the implementation of decentralisation in its higher education sector:

> In Hong Kong, the call for quality education and the launch of university-based management were initiated within a decentralisation policy framework. Instead of "micro-control", individual universities are now given more autonomy and power in determining their daily affairs. Nonetheless, this development does not necessarily mean deregulation and retreat of the state's control. Rather, the government can exercise control through its executive arm, the UGC (the University Governing Council), to maintain a close watch over individual institutional performance. The approach to reforming the higher education system is a managerial or an executive-led model, attaching importance to the ideas of efficiency, effectiveness and economy in education. (Mok 2003, p. 122)

Overall, we see that China's curriculum reform proceeds from the stages of cross-national attraction to decision and implementation. The example of curriculum success in Shanghai illustrates how the decision made at the national level was interpreted and carried out at the municipal level. It should be pointed out that Shanghai does not represent the whole of China, given the former's unique status as the most developed and prosperous city in China. But the Shanghai example serves to illustrate the implementation of curriculum reform at a specific locality.

3.3.4 Internalisation/Indigenisation

The eventual goal of educational policy borrowing using the Phillips and Ochs' perspective is internalisation/indigenisation. This chapter contends that this stage of educational policy borrowing is highly contentious. Internalisation/indigenisation becomes extremely problematic when the "transfer of training policies and practices across national systems of education and training" (Turbin 2001, p. 96) is seen as a natural consequence of an increasingly globalised world and is thus not sufficiently critiqued. Morishima's work on how Japan "succeeded" in adopting Western

technology is insightful as he critiques the Japanese experience of indigenisation, and cautions against the danger of borrowing foreign practices without fully appreciating local contexts (Morisihima 1982). Scholars and practitioners of policy have even gone to the extent of arguing that technology transfer in the name of modernisation "will often fail because there is no such system in place to support it" (Turbin 2001, p. 108).

3.4 Discussion

An analysis of China's recent curriculum reform reveals that China borrows neoliberal educational ideas and practices that originate from Anglophone countries such as the United States. Western characteristics of education are evident in an emphasis on decentralisation through greater school autonomy and school-based curriculum; a shift from transmission approach and rote-learning to constructivist approach and engaged teaching; and the addition of formative and alternative assessment to the traditional summative and pen-and-paper assessment (Tan 2016).

But it is important to note that these Western characteristics of education, however, did not replace the local ways of teaching and learning. Rather, the Western characteristics are combined with Chinese characteristics of education that underscore central control, transmission and didactic teaching, and high-stakes exams through summative and pen-and-paper assessment. In other words, rather than wholesale policy borrowing from the West, the foreign ideas and practices are being internalised and indigenised in China as they interact with local traditions, values, ways of doing and actors. The pragmatic ethos of China has allowed it to undertake policy borrowing while safeguarding itself from the dangers of failure due to the lack of local systems to support imported changes. As a matter of fact, in the case of China, this chapter concurs with the argument that in relation to policy borrowing in the field of management, for example, what actually transpires is the "Chinesenisation of Western management knowhow, or management with Chinese characteristics as the Chinese jargon goes" (Ying 1998, p. 219). In the field of education, internalisation/indigenisation of borrowed policy is evidenced by the English language policy adopted in Shanghai:

> To experiment with curricular reform, the SEC granted Shanghai municipality and Zhejiang province the autonomy to develop their own curriculums according to their local needs. They were expected to provide relevant experience for curricular reform in other parts of the country. In 1988, Shanghai set up its Curriculum and Teaching Materials Reform Commission (CTMRC) and started its curricular reform. (Hu 2005, p. 13; also see Wu 2001; Niu and Wolff 2003)

Countries that follow the path of educational policy borrowing and undertake the localisation of foreign technology are able to skirt the dangers of policy importation failure. South Korea's deliberate attempt to import advanced knowledge "from more developed countries" like the United States and Japan and adapting these "to local conditions" has contributed to the nation's steady rise in educational

performance (Sorensen 1994, p. 13). Shanghai's conscientious decision to develop its own curriculum according to local needs is another clear example of internalisation/indigenisation. An example of Shanghai's curriculum reform is the introduction of 'Inquiry/Research Subjects' that aims to help students to exercise their cognitive and affective faculties, construct knowledge and solve problems (Tan 2012). The focus is on getting students to 'learn to learn', inspire them to inquire and conduct research independently and apply what they have learnt in real life. Inquiry/Research Subjects comprise two types: Type I research which is multi-disciplinary, and Type II research which centres on specific disciplinary knowledge. By providing a wide selection of subjects, Shanghai students are given more options to choose courses based on their interests and aptitude while being commonly grounded on a firm foundation of basic content knowledge.

In the process of the 'indigenisation of policy' (Phillips and Ochs 2003), a hybrid model of teaching is being developed – one that combines both Chinese and Western characteristics of education. The adaption and assimilation of foreign and local ideas can be illustrated in a paradigmatic Chinese teaching method known as the 'teacher-dominated' pedagogy that is both teacher-centred *and* student-centred (Huang and Leung 2004; Gu et al. 2004). This method came into prominence after the introduction of the new curriculum reform as educators attempt to balance promoting student-centred approaches – a requirement of the new curriculum – as well as retaining their traditional teacher-directed pedagogy.

On the one hand, Chinese teaching tends to be teacher-centred as the entire education project, from the nature of knowledge, role of teachers and learning process, places the teacher in the driver's seat. Researchers have identified a set of Chinese characteristics that describe a 'good' teacher, 'good' teaching and learning (e.g. see An 2004; Huang and Leung 2004; Jin and Cortazzi 1998; Gao and Watkins 2001; Li 2004; Wong 2004). Chinese teachers, regarded as the repositories of knowledge, are expected to teach the students in a structured, incremental and progressive manner so that the students could master the depth and breath of the subjects. A 'good' Chinese teacher is one who possesses adult authority, has deep knowledge, is skillful in answering questions, promotes learning virtues especially adaptive attitudes towards learning in the students, and is an exemplary moral model (Jin and Cortazzi 1998; Gao and Watkins 2001; Li 2004; Wong 2004). 'Good' teaching in a Chinese classroom should accordingly be supported by a learning environment that is marked by orderliness, discipline, conformity and social interdependency (Huang and Leung 2004). This view of teaching and teaching is influenced by the Chinese tradition and particularly Confucian values, a topic which is beyond the scope of this chapter (for further reading, see Tan 2015, in-press).

On the other hand, Chinese educators have increasingly adopted student-centred approaches as part of China's curriculum reform. Schools in China are expected to encourage the students' active participation, nurture their practical abilities, and foster interaction and cooperation through a variety of subjects, programmes and activities (Ministry of Education 2001). But such student-centred approaches exist within a teacher-dominated environment where the teacher still retains the respect, control and decision-making. The hybrid model of teaching has been adopted across

Chinese schools to varying degrees and is manifested in various forms. An example is one Shanghai secondary school that adopts 'Constructing a dialogue style school culture' [*duihuaxing xuexiao wenhua jianshe*] (Tan 2013). Started in 2005, the focus is on encouraging a myriad of dialogue under a learner-centric environment. The school has identified four main types of dialogue:

Teacher-Student dialogue	Teachers need to infuse the dialogue spirit into teaching process, to remove the teacher's sole speaking right, and nurture the students' democratic and creative awareness, for teachers to become the students' growth helper, and grow as well.
Students-Text dialogue	Students need to have dialogue with the text's author for them to understand, analyse and appreciate the text.
Student-Student dialogue	Students need to cooperate in such a way that they acquire inspiration, self-expression and communication skills.
Students' self-dialogue	Students need to reflect on the process and extend the dialogue beyond the classroom by mulling over, recalling and learning about the real world.

On the one hand, this approach promotes student-centred teaching as it shifts the focus from teacher talk to student talk through various forms of dialogue. This, however, does not mean that the teacher has relinguished his or her teaching or control of the class. On the contrary, the teacher is still regarded as the content expert and is still expected to take the lead in teaching, inculcating moral values and disciplining the students. In this regard, the approach retains the 'Chinese' component of teaching. What has changed is for the teacher to be more sensitive to the needs of the students, and to plan his or her teaching in a way that incorporates the students' active participation in class. This change arguably reflects the 'borrowed' and Western-inspired component of teaching under the new curriculum reform. That is why this approach is a hybrid between student- and teacher-centred teaching. This point can be gleaned from the school's teaching appraisal method for teachers. The spotlight is on the students' learning situation. In other words, a good lesson is defined as one where the students have learnt well based on mutual listening and learning, where the teachers actively engage in dialogue with the students. The teaching appraisal is mainly based on questions such as the following:

- Has the teacher seriously listened to the students before he/she plans the lesson to draw out the students' thinking and sharing?
- Does the lesson include mutual listening by the students and teacher?
- Is the teacher sensitive to and is concerned with the students' learning conditions?
- Does the teacher seize the opportunity to let the students interact with the text so that they obtain fresh insights?
- Does the teacher wholeheartedly value the students' problems and doubts, and help the students to resolve them?

Although the traditional teacher-centred approach also stresses the importance of teachers showing sensitivity and care to the learning needs of their students, the prevalent exam-centric culture in China has resulted in many teachers overlooking the individual needs of the students in their quest to complete the syllabus and focus on exam preparation. Hence the teaching appraisal serves to remind teachers to be student-centred in their lesson preparation and delivery.

This student- and teacher-centred form of learning transforms the traditional didactic style of 'making me learn' to students taking the initiative and say 'I want to learn'. In a typical lesson, students first read teaching materials and complete the 'self-learning test' on their own 1–2 days before the lesson (Liu 2009). On the day of the lesson, the teacher guides the students in discussing and sharing their ideas with one another. Next is 'thinking training' where the teacher corrects the students' inadequacies, encourages the students to raise questions, and engage in problem-solving. The lesson ends with the students revising the knowledge they have learnt. A survey conducted by a teacher of the school where the initative was introduced shows that 82.4 % of students have become more interested in learning compared to the past where students hardly spoke up in class (Liu 2009).

An obvious advantage of this hybrid model of teaching is that it enables teachers to conduct more interesting and engaging lessons that promote active and enjoyable learning in the students. Teachers also benefit from it as they are encouraged to explore alternative teaching approaches and tools such as ICT, thereby contributing towards their professional development.

Notwithstanding the merits of the hybrid model of teaching in China, this model is time-consuming as it requires intensive preparation on the part of the teacher. In addition, teachers face greater pressure than before in juggling both the implementation of student-centred teaching and improvement of high-stakes exam scores. In other words, the effectiveness of this model is limited by a perennial challenge of balancing student-centred and engaged learning with performance in high-stakes exam. Exam-oriented approaches of teaching and learning – transmission of textual knowledge, memorisation, repeated practice and didactic teaching – are upheld as tried-and-tested methods for students to perform well in high stakes exams (Tan 2012). Nestled within a high-stakes testing context, it is challenging for teachers to strike a fine balance between student- and teacher-centred approaches. The temptation is for teachers (and the school principals) to revert to exam-preparation techniques, since the students' performance in the high-stakes exam is ultimately the determinant for acceptance into a prestigious university. Beyond the hybrid model of education, the above-mentioned challenge threatens to undermine the aim of the curriculum reform to nurture young people who are lifelong learners equipped with the ability to add to, exchange and apply knowledge, conduct research, experiment, innovate and solve real-life problems and work well with others. After all, the above-mentioned skills and dispositions cannot simply be tested in any written exam.

3.5 Conclusion

This chapter has argued that the curriculum reform in China, as analysed from the four stages of education policy borrowing in China, has brought about visible changes in the aim of education (quality-oriented education), teaching, learning and assessment in the schools. A result of the internalisation and indigenisation of Western ideas and practices is a hybrid form of teaching in China. Given the vastness of and disparities across China, such as Eastern-Western regional difference and urban-rural divide, it is expected that the process of curriculum reform and policy borrowing in China is not smooth-sailing or homogeneous, nor the outcome predictable. Instead, what we have seen and can expect to see in the future, are adaption of 'borrowed' policies and co-existence of these policies with indigenous practices and values.

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Chapter 4
Expanding Horizons of Curriculum Wisdoms: Teachers' Experiences in New Curriculum Reform in China

Linyuan Guo-Brennan

Abstract China, the developing country with the largest and oldest public education system in the world, is transforming its education system through nation-wide school curriculum reform. The new national curriculum marks a dramatic change in the underlying educational philosophy and practices, which have deep cultural and historical roots in Chinese society. This chapter reports on a hermeneutic study investigating what this massive curriculum reform means for teachers by grounding an enquiry in in-depth conversations with six teachers in Western China. A hermeneutic interpretation of these conversations reveals the complex dimensions of teachers' compliance and/or resistance with respect to change at a time when the Chinese curriculum landscape is shifting dramatically from a local to global perspective. Through linking the Chinese educational history, contemporary curriculum theory, and teachers' practices, this chapter presents new understandings of East and West curriculum wisdoms, teachers' identity transformation, and the psychological and social dynamics of Chinese teachers' learning in this large-scale education change.

4.1 Introduction

For several decades, education reform and curriculum change has been a global phenomenon. China has the world's largest and oldest public education system and is transforming its education system through large-scale school curriculum reform. Much research on education and curriculum change has been conducted since the late 1960s and literature on systematic large-scale change is readily available and valuable (Aoki 2005; Carson 2009; Fullan 2010; Guo 2010, 2012; Hargreaves et al. 2010). However, the existing knowledge is not sufficient to address the unique problems and challenges that educators confront in China, where educational

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practices are deeply rooted in its cultural and historical traditions. The daunting challenges and issues identified in historical, social, and cultural contexts demonstrate that conventional change discourse lacks an adequate sense and theory of how and why teachers act (and react) as human beings when faced with significant curriculum changes.

While the education change literature repeatedly reminds us that it is too naive and unrealistic to expect teachers to change their practice based on some prescribed curriculum implementation plan or strategies, there has been little insight about the intersubjective nature of teachers' knowing and learning in education change processes. It is therefore the purpose of this interpretive study to explore and understand teachers' lived experiences in the nation-wide curriculum reform in China. By grounding an enquiry in in-depth conversations with six teachers in rural Western China, three interrelated questions are investigated: (1) What does this mass curriculum change mean for teachers in China? (2) How is contemporary curriculum theory and practice being received by teachers? (3) How is teachers' implementation of the new curricula affected by Chinese wisdom traditions?

In this chapter, the term of *Curriculum Wisdom* refers to an inter-disciplinary and cross-cultural space for understanding and study curriculum through examining the history and present circumstances of a distinctive curriculum tradition and structure. This study is significant because it shifted away from the dominating positivist scientific study on external forces of change. By focusing on understanding teachers' lived experiences in massive change, the tensions, contradictions, and complex dynamics in teachers' learning are revealed. The original difficulty of teachers' lives during periods of educational change and how such difficulty is tied to the wisdom traditions in China provide an interpretive space to conduct transnational curriculum conversations.

4.2 Educational Traditions and the New Curriculum Reform

China has a long history of education and the roots of its education system can be traced back as far as the sixteenth century B.C. Throughout its long history, education in China has remained a highly centralized system dominated by Confucian tradition of merit and the examination culture which "has been woven into the social fabric of the Chinese people's everyday life" (Li 2005, p. 50). Teaching and learning in Chinese schools has traditionally focused on helping students achieve good exam scores in standardized tests at various levels. The emphasis on exams contributes to the textbook-oriented curriculum understanding and teacher/textbook-centered educational practices.

Since early 1990s, China has been experiencing rapid social, economic, and political change, which called for fundamental changes in education to prepare citizens with the knowledge and skills needed for an increasingly globalized world (Guo 2010; Pepper 1996). The Ministry of Education in China released the Basic Education Curriculum Reform Outline in June 2001 and officially started the most

unprecedented basic education reform in Chinese modern education history: the New Curriculum Reform (NCR). The philosophy underpinning the new curriculum is for each individual student's development (Zhong et al. 2001). The Basic Education Curriculum Reform Outline (Ministry of Education 2001) specifies the following six objectives:

1. Develop a comprehensive and harmonious basic education system. Change the function of curriculum from knowledge transmission to helping students become active lifelong learners;
2. Construct new curriculum structure. Change the subject-centered curriculum structure into a balanced, integrated, and optional curriculum structure to meet the diverse needs of schools and students;
3. Reflect contemporary curriculum content. Reduce the difficulty and complexity of the old curriculum content and reflect the new essential knowledge, skills and attitudes that students need to be lifelong learners;
4. Promote constructivist learning. Change the passive learning and rote learning styles into active and problem-solving learning styles to improve students' overall abilities of information processing, knowledge acquisition, problem solving, and collaborative learning;
5. Develop appropriate rationales and objectives of assessment and evaluation. Curriculum assessment and evaluation shifts from its selective purpose to improving the quality of teaching and learning. A combination of formative and summative evaluation strategies are required in implementing the new curriculum; and
6. Promote curriculum democracy and adaptation. Curriculum administration is decentralized toward a joint effort of central government, local governments, and schools to strengthen the relevance of the curriculum to local contexts.

These six objectives indicate the scope and complexity of this reform and have called for transformative changes in curriculum structure and content, teaching and learning styles, assessment and evaluation practices, and administration of curriculum development and implementation. Joseph Schwab (1969), University of Chicago professor of education and natural sciences, defines four commonplaces of curriculum – learners, teachers, subject matters, and sociocultural milieu – and emphasizes that curriculum specialist must work with the representatives from each place to ensure that the commonplaces are properly coordinated because changes in any one will have consequences for the others. All four commonplaces and their relationships with one another are required to be changed by the new national curriculum policy and documents, which differ dramatically from current practices.

Conventional curriculum orientation, habitual teaching and learning styles, and the new curriculum requirements manifest not only numerous challenges for teachers, but also tremendous learning and uncertainty. For instance, teachers in the past were required to strictly follow *jiaoxue dagang* (teaching syllabi) – nationally prescribed subject reference materials with prescribed topics and teaching sequences – and textbooks in lessoning planning and classroom instruction because all standardized exams are based on content included in these materials. This type of

teaching, described as *Daizhe Liaokao Tiaowu* (dancing with bonds) (Zhong et al. 2001), is controlled and driven by uniformly imposed 'official knowledge' in the form of syllabi, textbooks, examination and evaluation systems, policies, and regulations. These discursive educational practices have defined teachers' philosophy of teaching and learning, purpose of teaching and learning, curriculum understanding, instructional strategies, and pedagogical relationships.

4.3 The New National Curriculum and Its Demands for Teachers

The new curriculum in China is framed and presented by western epistemologies (theory of knowledge) and pedagogies (process of learning/knowing). Many of these concepts are disconnected from the core components of Chinese philosophical and educational traditions, which anchored in ideas such as jiaoshu yuren (teach the book and cultivate the person), chuandao shouye jiehuo (explain idea, impart knowledge, and resolve doubts), harmony, unity, and zhongyong (the Middle Way). Chinese philosophical traditions offer constructive insights into transnational curriculum conversations, where curriculum scholars need to distance themselves from their own situations as they come to understand others. Harmony, the fundamental Confucian doctrine, emphasizes the essence of the universe and human existence as peace and coexistence. Based on this principle, East and West are not viewed as culturally and politically opposed forces, but as co-existing ways of being and knowing. According to Confucianism, the path towards harmony is zhongyong zhidao (the middle way), which reminds us to recognize the strengths of each educational system and curriculum structure and to seek a balance in integrating these strengths based on local situations. This philosophical viewpoint helped teacher participants to think critically about eastern and western curriculum, cultural traditions, and to expand their own horizons of understanding. These Confucius wisdoms inspired them to transform out-of-context knowledge contained in the curriculum into knowledge-in-action in a creative way.

While teachers are trying to develop new pedagogic strategies, they are simultaneously re-conceptualizing their understanding of teaching and learning as well as their identities formed in an examination-orientated and very competitive elitist education system. Teachers are required to become thoughtful and tactful pedagogues with enhanced professional capacity for thinking, introspection, reflecting, and appreciating the complexity of the new curriculum and its application to their local contexts. The complex nature of this massive curriculum change, which combines political, economic, and technological developments to change traditional cultural assumptions and educational practices, indicates an urgent need for a sophisticated understanding of the meaning of change for teachers in relation to how curriculum implementation can be deeply responsive to and resonant with what teachers know, who teachers are, and who they can change into.

Supporting teachers in dramatic curriculum change through quality teacher training and development is extremely critical in Western China, wherein education resources are limited, school facilities and infrastructure are dilapidated and unsafe, teachers have little access to professional training and development, and poverty and illiteracy rates are the highest in the country. Through her international teacher development work with teachers in 360 selected rural schools in Sichuan, Ningxia, and Xinjiang, the author of this paper has observed the unique challenges experienced by rural teachers as well as those common to all teachers who are trying to translate the new curriculum into practices (Zhong 2006). Therefore, the author felt inspired and compelled to investigate the tensions, contradictions, and complex dynamics of teachers' learning and give the original difficulty of rural teachers' lives in this large-scale education change a voice.

4.4 Interpretive Curriculum Inquiry in Practice

Hermeneutics, the art and theory of understanding and interpretation, was chosen as the theoretical framework to guide the interpretive inquiry of teachers' lived experiences in the massive curriculum reform in China. Hermeneutics not only represents a dialogical process of understanding, but also requires a commitment to this process through interpretation. In addition, hermeneutics questions the limitation of positivist research approaches founded on modern empirical science by attending to the humanness of being in the world, and offers important insights to understanding the deeply intersubjective nature of human knowing (Gadamer 1989; Smith 2006). And most importantly, the continuous and dialogic nature of understanding, connoted in the concept of the hermeneutic circle, signifies the opportunity for both researcher and participants to expand their horizons about education change and curriculum traditions.

Conversation was adopted as the research method for collecting, analyzing, and making meaning of data. Conversation is a dialogic process of question and answer, giving and taking, talking at cross-purposes, and seeing each other's point of view through a working out of common meaning (Gadamer 1989; Feldman 1999). The participants of this study consist of six teachers from urban and rural schools in Western China. Each teacher participant was invited to take part in three audiotaped 1-hour conversations conducted in Mandarin during 2007–2008. This group of teachers represented a diverse background in terms of their school contexts, subject areas, grade levels, gender, age, and ethnicity as shown in the following table:

Teacher	Gender	Age	Ethnicity	School	Discipline/role	Grade
Zhang	Male	30s	Han	Rural	Chinese	11
Sun	Female	50s	Han	Rural	Science	6
Shi	Male	30s	Han	Rural	English/School Principal	4/5/6
Wan	Male	30s	Hui	Urban	Math	7
Zhao	Female	20s	Han	Rural	Math	3
Fu	Male	30s	Han	Urban	Chinese	8

As China is a geographically large country and the social, cultural, economic, and school contexts are tremendously diverse in different regions, the sampling of six teachers is not intended to represent the over ten million school teachers currently working in China. Rather, this study aims to gain an advanced understanding of teachers' lived experiences in the massive education change and to expand their horizons on curriculum reform through valuing, examining, and transcending current educational experiences without explicitly distinguishing from the past.

Data analysis was an ongoing interpretive process and the underpinning analytical and interpretive framework is hermeneutic in application. Analysis of the conversations attended to meanings and understandings generated from the speaking, listening, sharing, questioning, and reflecting process through the study.

4.5 Findings of Research

Research data interpreted in an ongoing fashion and the themes of findings were analyzed and generated to address three interrelated research questions, including what the mass curriculum change mean for Chinese teachers in China; how contemporary curriculum theory and practice is received by teachers; and how the implementation of the new curricula is affected by Chinese wisdom traditions. The selected themes reported in this chapter are not the only themes or even the most central. Rather, it is an attempt to demonstrate how teachers' experience in curriculum change and curriculum traditions can be understood hermeneutically and what this understanding has to do with teachers and those who work with teachers. To ensure confidentiality, each participant is given a pseudo-family name followed by a popular Chinese Laoshi, which literally means old master and is a respectful Chinese term for a teacher or a person who is considered very knowledgeable and well-respected.

4.5.1 Meanings of Curriculum Reform for Teachers in China

Understanding the meaning of curriculum reform and reaching a new understanding about curriculum change was the essence of the conversations between the author and the participants. In the process of reaching a new understanding, both participants and the author used the familiar common language – the terms, expressions, and situations we all could relate to in the face of this curriculum reform – to articulate and interpret such meanings.

4.5.1.1 Feeling Lost in Curriculum Change

The sense of loss and ambiguity is a shared feeling by all teacher participants in this study. Explaining how he got to know the new curriculum, a teacher said:

> The content and structure of the textbooks changed and they are very different from the former textbooks. The top disseminated resource books on curriculum reform to schools and we were required to take two tests on these books each year. I attended some training sessions about curriculum reform. (Zhang Laoshi, Conversation 1)

This conversational excerpt indicates that teachers' feelings of lost came from their ambiguity about the demanded changes and their unpreparedness for the change. In Western China, many teachers do not have much quality professional development opportunities, their most significant preparatory work for this curriculum change consisted of a few tests on the new curriculum and some training sessions to prepare for these tests. His resistance to and lack of ownership of the new curriculum was clearly implied in the word *the top* he used repeatedly at the very beginning of our conversation. In Chinese, the top is a colloquial term referring to Ministry of Education, Provincial Educational Department, local Educational Bureau, or the District Education Office. His unconscious use of this term indicated the "top-down" nature of the massive curriculum reform in China.

Teachers' ambiguity about what is expected to change in curriculum reform was a repeated theme emerged in the research conversations:

> What on earth does the new curriculum ask me to change? It seems that it asks a teacher to change from being a 'Shepherd' to being the 'Lead Sheep'. … If a teacher were a 'shepherd', it means he controls the students; the relationship (between teacher and student) is controlling and controlled; In this case, students are like the animals controlled by the human being (shepherd); If a teacher were a leading sheep, he would direct students' learning and give students space to learn by themselves; teachers and students are in an equal relationship. (Wang Laoshi, Conversation 1)

The metaphor this teacher uses on the changed role of teachers indicates that his understanding of curriculum change focuses on the changes in a teacher's identity and pedagogical relationship with students. Such understanding of the demanded changes is confirmed by other teachers:

> In the past, as a teacher I had the absolute authority in teaching and learning and I always felt superior to students. I needed to strictly control students to make sure they follow the learning objectives and content I planned. Since we adopted the new curriculum, I was 洗脑 (brainwashed) to get rid of these deeply-rooted ideas. I attended training workshops, self-studied materials on the new curriculum. I am striving to have an equal relationship with students, and hope they might accept my teaching easier. (Wang Laoshi, Conversation 2)

Teachers' unsettling sense of confusion in curriculum change was obvious in Wang Laoshi's remarks. His beliefs and perceptions on teaching and learning are being challenged through certain training sessions and techniques, which he called being "brainwashed". Reflecting on his resistance towards the new curriculum, he said:

> Accepting the new curriculum and the new rationales are very difficult because I've been teaching in the traditional way for a long time. It is difficult to make the change, (because) I don't have a good understanding of the new curriculum. I am trying to make some changes but both students and I felt changes only occurred at the surface. We didn't know how to make it happen in a deeper sense. This is also why I didn't want to change. (Zhang Laoshi, Conversation 2)

For teachers like Zhang in Western China, where there are very limited resources and few professional development opportunities, understanding the historical and cultural contexts of teacher identity formation is as important as understanding the rationale and outcomes of the expected change. Like many other teachers, Zhang's teaching practice is constructed through the process of being a student, becoming a teacher, and being a teacher in a very traditional teacher-centered and exam-based educational environment. This type of teaching and learning has long been supported by the school structure and valued by the community. It is natural for teachers to follow preordained paths, especially when the surrounding educational environment and structure has not changed in decades. Therefore, how to help teachers make connections between their practicum wisdoms and experiences with the new curriculum should be an important component built into the professional development and curriculum implementation process.

4.5.1.2 To become a teacher-learner evolves psycological and pedagogical struggles

All teacher participants indicated they were interested in learning new theories, subject content, and skills to meet the demands of the new curriculum. However, it was not an easy process to become a teacher-learner. Many teachers shared the following concerns:

> I am concerned about showing I am not as knowledgeable and capable as I should be. I become a learner. That is the problem. When (I) asked for help from other teachers, (I) was afraid that I would be looked down upon by my colleagues. As a teacher I always wanted to keep my dignity and authority and wouldn't want my colleagues to know that I was incapable of meeting these demands. (Zhao Laoshi, Conversation 1)

To become a teacher-learner, teachers like Zhang have to step down from a superior position as an authority to an inferior position as a student, which indicates teachers need to reconceptualize what teaching and learning actually mean. While developing new knowledge, skills, and beliefs about student-centered teaching and learning, teachers have an unconscious yet strong adherence to their perceptions on what it means to be a good teacher and a student formed through former experiences. To teachers, taking up the role of being an active learner is not only a pedagogical decision, but also a psychological and deliberate decision.

A number of teacher participants acknowledged that there was so much to learn and they often lost their confidence in trying to evoke students' inquiries. Given the opportunities, students often raised some unexpected questions in the learning process. Some teachers didn't know how to respond to students in such circumstances because they were rarely challenged by students before. Wang Laoshi said when-

ever he encountered such circumstances he would avoid giving students the opportunities to ask questions and purposely used lectures to cover the teaching content.

> I often encountered students' questions I couldn't answer in the class. I felt ok to tell the students that I didn't know the answer but would do more research after class the first time; but I couldn't say I didn't know again a second or third time. It was embarrassing. This type of incident happened a lot in my class at the beginning of using the new curriculum. (Whang Laoshi, Conversation 2)

Wang Laoshi's reflection implied he still believed that it's a teacher's responsibility to provide all answers to student's questions. It also indicated that he had to embark on a journey of learning diverse pedagogic skills in practice. Learning demands by the new curriculum are multifaceted and there is no road map for this journey. The dual parallel tasks of teaching and learning have created contradictory situations and required teachers to remain balanced between the role as a learner of the new curriculum and the role as a teacher in a unchanged educational environment.

4.5.1.3 Shaping new understandings about curriculum

The new national curriculum in China is designed to serve as the ultimate guide for teaching and learning outcomes and grants a teacher the autonomy to choose or develop appropriate curriculum resources suitable to their students and local context. Traditionally, only the selected textbook and its accompanying teaching syllabus are considered as authorized curriculum and all teachers had to follow these resources strictly with very little freedom to adopt any other useful curriculum resources in teaching practice. Teacher participants in this study noted that the curriculum reform meant that they needed to develop a much broader understanding about curriculum, which includes curriculum resources, pedagogical relationships, teaching context, and assessment strategies. The broadened curriculum understanding has led to a series of changes in their teaching practice.

> I used to transmit concepts and knowledge to students. Now I am using examples to connect the math content with students' lives. This is a big change. In addition, the new math curriculum contains other subject content, such as Physics. When I am not very clear about these interdisciplinary concepts, I would ask my colleagues for explanation. I didn't have to do this before. I wonder if collaborative teaching is one of the objectives of the new curriculum. (Wan Laoshi and Researcher (G), Conversation 1)

Reflecting on the changes brought by the new curriculum, a few teacher participants talked about the new ways of dealing with textbooks, pedagogical relationships, and the increased collaborative teaching demands generated by the new curriculum. Interestingly, during our conversations, new subject curriculum standard documents were not mentioned by teacher participants, which indicates that they have not been viewed and adopted as the critical guiding document for teaching and learning. Teachers' repeated comments on the changes in the structural content of the textbook indicates that the textbook still remained the most important single source of curriculum material. This phenomenon reflected the dilemma experienced by many teachers in western China.

4.5.1.4 Pedagogical, cultural, and psychological tensions in reconstructing teaching identity

The new curriculum charges teachers with a task of reforming their current teaching identity and pedagogical relationships. Many teachers struggle between the envisioned teachers' identity and pedagogical relationship in the new curriculum standards and those they formed throughout their lives. In Chinese context where students are socially expected to respect and follow teachers' instructions, educational democracy and equal pedagogic relationship are challenging concepts for both teachers and students. In reality, encouraging students to examine a teacher's instruction in a critical manner and to speak out their minds or thoughts in class was actually a dilemmatic decision-making process for a teacher, pedagogically, culturally, and psychologically.

In addition, teachers also pointed out that many required changes relate to teaching and learning strategy were not only methodological, but also cultural. Fu Laoshi commented:

> Teaching reflects cultural and educational values. In Chinese language arts, memorization is valued as an effective strategy to inherit ancient classic texts and cultural excellence. As learners, we always feel proud if we can memorize ancient classics or texts. The texts students need to recite are listed on the new curriculum document and textbooks. Learning by memorization is always stressed and valued in practice…Some learning and teaching styles such as memorization are rooted in Chinese cultural traditions and can't be easily eliminated or changed. (Fu Laoshi, Conversation 2)

Fu also pointed out that memorization is the only practical approach to learn how to write Chinese characters. Many teaching and learning strategies adopted by the Chinese teachers such as memorization were not only methodological, but also carry specific Chinese cultural values and traditions. On one hand, memorization was defined as rote and passive learning by the new curriculum; on the other hand, classic poems and texts are still prescribed in the new curriculum for students to memorize as an approach to appreciate and value Chinese cultural and educational heritage. The cultural dimension of certain teaching and learning styles is not fully discussed and reflected in the new curriculum and professional development resources. Many teachers had to face these dilemmas without much assistance and guidance.

4.5.2 New Curriculum as Confersation Between Chinese and Western Educational Perspectives

Chinese cultural traditions have great impact on teacher identity and educational practices in schools (Gu 2006; Guo and O'Sullivan 2012; Hui 2005). In the process of making meaning of the new curriculum, many teachers search for connections and differences between the contemporary educational theories and Chinese wisdom and philosophical traditions. Through comparison, a teacher shared his personal insights:

> Many ancient Chinese philosophical traditions, such as Confucianism, Taoism, Buddhism, I Ching, and Legalism, have focused on the development of human beings. Student development is the development of human beings and it is the ultimate goal of the new curriculum. The new curriculum and student-centered pedagogy answer the same philosophical question. (Shi Laoshi, Conversation 2)

According to Shi Laoshi, Taoism reminded both policy-makers and teachers to clarify and understand the fundamental goal of education reform before making any meaningful change in practice. He didn't think the new curriculum policy and standards had addressed this fundamental question and that was why there were many ambiguous assumptions in practice.

> We need to know the bigger picture for curriculum change. But now we only know the specific standards of each subject, but don't know the philosophical foundations and systematic framework supporting the change. Without a bigger picture, implementing the new curriculum is like shooting an elephant without knowing where it is. It doesn't matter how hard you are working towards it, you can't be successful. (Shi Laoshi, Conversation 2)

Teachers' questioning on philosophical foundations and framework supporting this curriculum change indicates their genuine concern about the future and direction of this massive curriculum change. According to Shi Laoshi, Chinese wisdom traditions enable teachers to think beyond the superficial changes prescribed in the curriculum policy documents and examine the deeper philosophical and historical factors influencing their perceptions of teaching, learning, curriculum, and education. Understanding the philosophical connections and differences between the new curriculum and Chinese wisdom and educational traditions enable teachers to connect the new concepts with prior experiences and to understand the deep root of their professional identities. Such enhanced understanding helps teachers reduce their resistance to the new curriculum and understand the deeper and broader issues related to curriculum change.

Shi Laoshi's understanding and appreciation of the Chinese wisdoms enabled him to ground his learning in something he already knew. His findings of the shared philosophical similarities between Chinese philosophical traditions and those new educational theories advocated by the new curriculum shifted his efforts from simply developing new strategies in curriculum implementation to promoting the well beings of students through the new curriculum. This shift made it possible for him to critically examine new ideas and theories and to embrace the excellence of these 'foreign' theories, which many of his colleagues found "good but not applicable".

4.5.3 Curriclum Wisdoms in Chinese Philosophical Traditions

It is well documented that Chinese intellectual traditions have great impact on the curriculum, teachers, and learners in China (Watkins and Biggs 2001; Wong 2008; Zhang 2008; Zhu 1992). The presence of Chinese educational and philosophical wisdoms, as interpreted in this study, not only show the roots of teachers' educational values, attitudes, and positions, but also create an interpretive space in which

they find resonance with their identity. These wisdoms make it easier for teachers to embrace the freedom of honoring or rejecting the 'other' based on their own situations. *Curriculum wisdom*, an inter-disciplinary umbrella term developed in this study, provides a cross-cultural space for understanding curriculum through the lens of wisdom traditions. The Chinese word for wisdom – *zhi hui* – indicates the holistic integration of knowledge, understanding, and experience with the capacity to apply these qualities towards problem solving. Therefore, curriculum wisdom demands curriculum scholars to conduct in-depth examinations of the intellectual history and present circumstances of each distinctive curriculum tradition and structure.

The new Chinese curriculum provides an unprecedented opportunity to engage in transnational conversations about how curriculum can facilitate teaching and learning sensitive to multiple modes of reasoning, worldviews, and cultures (Guo 2010; Zhang and Zhong 2003). This massive curriculum change should not simply be the content of transnational conversations, but a domain for conversations between East and West. At a time where the internationalization of curriculum studies has become a shared concern in the field of curriculum studies, such a space is not only necessary, but critical for meaningful discussions on connecting ourselves with these diverse ways of knowing and being.

4.6 Conclusion: Expanding Horizons of Curriculum Wisdoms

Through examining the historical and cultural contexts of the new curriculum reform in China and sharing teachers' voices and experiences in the dramatic change process, this study confirms that curriculum wisdom traditions can be adopted as an interpretive space to understand the boundaries and possibilities of conducting complicated transnational curriculum conversations. As education reforms in many countries are increasingly affected by globalization, transnational conversations about curriculum and curriculum traditions will enable us to achieve a deeper understanding of the complexity and intersubjectivity of teachers' experiences in such large-scale curriculum change (Gough 2003; Guo 2010; Pinar 2004; Zhang 2008).

Gough (2007) argued that curriculum studies and conversations are not culturally inclusive. Instead, they continue to be dominated by scholars who work in Eurocentric scholarly traditions. As the field of curriculum studies calls for a new paradigm shift towards internationalization of curriculum studies, Pinar (2009) emphasizes that this process must be an ongoing critical conversation among curriculum scholars through disagreements, reaffirmations, and reconsiderations. Conducting culturally and lexically inclusive conversations on curriculum understanding in an international arena is not an easy task, even if all educators and scholars are willing and motivated. If a lexicon accessible to all is necessary to achieve this goal, curriculum wisdom is suggested in this chapter.

By examining the social, cultural, psychological, political, and historical factors shaping Chinese curriculum traditions and teacher's experiences in curriculum reform, opportunities and productive agendas will develop to expand our awareness, capacities, and competencies to intellectually break through the cultural supremacy and oppression embedded in a global curriculum agenda. Cross-border conversations on curriculum and the original difficulties of living through dramatic curriculum change can also lead to a new level of global equity and social justice, which is a uniform response to critical global educational issues.

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Chapter 5
A Study of Educational Policies Relating to Afterschool Programs and Educational Equality in Taiwan

Kent Sheng Yao Cheng and W. James Jacob

Abstract Since the 1960s, educational policies have increasingly focused on issues regarding disadvantaged students and their schooling. How to manage the struggles faced by disadvantaged students during their schooling has become a priority that educators and administrators need to consider, especially issues related to afterschool programs. Like the Elementary and Secondary Education Act (ESEA, Title I) in the United States and Educational Priority Area (EPA) in the United Kingdom, Taiwan has educational policies for disadvantaged students and afterschool programs dating back to 1995. To determine strengths and weaknesses of these afterschool program policies, we review theories related to disadvantaged students and schooling, including Rawls (1972), Coleman (1990), Sen (1988), and Young (1990). We describe a survey we undertook focusing on disadvantaged students in afterschool programs, to find the best possible solution for this type of model. In addition to this quantitative data, three focus groups hosted by the researchers provide further useful qualitative reflections. Based on results, the authors discuss suggestions for further research and policymaking, as well as their conclusions.

5.1 Introduction

Every student is entitled to the same educational opportunities and the related possibilities of social advancement. This is the ultimate goal when we consider issues related to the equality of educational opportunities and social justice. However, along with the appearance of M-shaped societies in Taiwan, educational, societal,

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and cultural divides among students who 'have' and those who 'have-not' are expanding rapidly (Cheng 2004; Cheng and Jacob 2008). At the same time, schooling has been criticized by sociologists for the role it plays as an agent of social reproduction and cultural hegemony (Bourdieu 2000; Gramsci 1999, 2001).

To solve these problems, the President of the United States, Lyndon B. Johnson, in 1965, began to urge educational reform through his *War on Poverty*, and used the *Elementary and Secondary Education Act* (*ESEA*) to provide more financial assistance to local educational agencies for the schooling of children from low-income families (Spring 2000). The Head Start Program continued to focus on the early learning of students from low socioeconomic status (SES) backgrounds and their families in the United States from the same time. In 2001, President George W. Bush announced the *No Child Left Behind Act* (*NCLB*) designed to close the achievement gap through accountability, flexibility, and choice, so that all children would have the same opportunities and no learners could be forgotten (Paige 2001; U.S. Department of Education 2002). Recently, the Obama Administration followed global trends of educational equality with such initiatives as Race to the Top and the Common Core State Standards. These aim to ensure that every student in the United States is supported by their schooling to make their dreams come true (Larsson 2001; United States Government Accountability Office 2011).

Similarly, in the United Kingdom, the *Plowden Report* was promulgated in 1967, and started to emphasize positive discrimination and the Educational Priority Area (EPA). In 1998, the EPA was revised to include the Education Action Zone (EAZ), but the main concerns were still on providing support to disadvantaged students and their communities (Gold 2007).

In Taiwan, educational policies including the Five Year Plan for Developing Elementary Education, the Six Year Plan for Developing Elementary Education, and other policies related to minority or disadvantaged students were released between 1977 and 1992 (Cheng and Jacob 2008). Since 1994, EPA programs were implemented in schools and communities at high risk of natural disasters such as earthquakes and subsidence. Moreover, the Ministry of Education (MOE) in Taiwan started to deal with the issue of remedial teaching and afterschool programs for disadvantaged students in 1998. In 2003, the National Educational Development Committee continued to strive to improve educational opportunities of minority groups and maximise their social mobility. Three years later, in 2006, the government integrated the remedial teaching plans into the Hand in Hand Afterschool Program, and encouraged college students and retired teachers to serve as mentors during afterschool teaching. In 2008 and 2010, the MOE continued to establish the Night Angel Enlightening Program and Digital Learning Partners Programs. Most recently, in 2013, the government amalgamated all the programs into the Remedial Teaching Program to ensure disadvantaged students would benefit from the same quality of education whether in school, after school, or out of schools (Cheng 2013).

Along with the official afterschool programs, a group of nongovernmental organizations (NGOs) and non-profit organizations (NPOs)—such as the Yonglin Educational Foundation and Boyo Foundation—have committed themselves to

afterschool programs and focused on remedial teaching to increase the academic achievement of disadvantaged students since 2005. These organisations aim to focus on remedial teaching for disadvantaged students and give them a positive learning experience. The principal investigator of the research described here has been director of the Institute for Disadvantaged Students' Learning (IDSL) at the Yonglin Hope School since 2007, and during this time has developed a set of learning materials, teaching approaches, digital learning apps, and on-line evaluation for remedial teaching. To describe the real experience of disadvantaged students in remedial programs in Taiwan, the researcher juxtaposes the existing literature and the remedial teaching programs run by IDSL to discover and reflect on the outcome of remedial teaching.

5.2 Minorities, Disadvantaged Students, and Schooling

John Ogbu (1983, pp. 168–170) divided minority groups in the United States into three tiers: autonomous, immigrant, and caste-like. Autonomous minorities are typically ethnicities with smaller populations in that country like the Amish, Jewish people, and Latter Day Saints (Mormons). Immigrant minorities are people who came to the United States to fulfill their 'American Dream.' They chose a move to the new mainland in the hope of improving their lives, and include Chinese Americans, Japanese Americans, Korean Americans, and Philippians. The final group, the caste-like minorities, came to the United States involuntarily and live with reduced social and economic status. These groups include many American Indians, Mexicans, and Puerto Rican immigrants.

Ogbu (Gibson and Ogbu 1991; Ogbu 1978) emphasized that there are some groups of students who consistently constitute a large proportion of failures in the education system. This is a meaningful finding for educators. In society, there are unequal power relations and career 'ceilings', which impact the lives of disadvantaged/minority students. Ogbu (1983) also commented on classroom dynamics between dominant and minority groups, which he suggests contributes to the disproportionate failure of minority and disadvantaged students. Learning divides among students are often exacerbated by discontinuities between their own family/cultural background and school culture. Ogbu emphasized the discontinuities that exist for cultural values, and in cognitive, motivational, communicative, and interactional domains. He divided them into three tiers including the universal, primary, and secondary type. Universal discontinuities refer to all the challenges students face due to the divides between their families and the school culture. Primary discontinuities are cultural differences between immigrants' home countries, non-Western countries, and typical American schooling. Secondary discontinuities highlight the learning experience of minority students from caste-like families who have had little time and few resources to get used to their new school culture due to their parents' involuntary immigration.

In contrast to Ogbu's discontinuities theory focusing on differences between school and family culture, Urie Bronfenbrenner's ecological model (1979) proposed that minority students should be considered in terms of six layers including the family, school, communities, economy, culture, and ethnicity. Following in a similar vein, the *Title I* of the *Elementary and Secondary Education Act (*ESEA 1965), pointed out that we need to provide special support to students from school districts with high poverty, low achievement and low English proficiency, immigrants, children with special needs, American Indians, and those with specific reading difficulties. Recently, the National Center for Education Statistics (NCES 2012) defined 'minority students' as those coming from disadvantaged social backgrounds and attending school in poor school districts or through their racial and ethnic backgrounds. The Institute of Education Science (IES 2008) continued to consider minority students in terms of three broad categories: socially disadvantaged (African Americans, American Indians, Mexican Americans, and Chicanos), economically disadvantaged (poor school districts and remote areas), and culturally disadvantaged (Cuban Immigrants, African American, Amish, and special needs students).

In Taiwan, a series of educational policies has been published in the last 2 years. These include the Free Tuition Education Plan, Education Priority Plan, Hand in Hand Plan, and Free and Reduced Meal Plan. Each educational policy has its own definition of minority students. According to the Plan for Minority Students' Support (MOE 2011), the Education Priority Area (EPA) Plan mainly helps students who are Taiwan Aborigines, come from lower income families, are parented by grandparents or a single parent, children of new inhabitants, those in remote school districts, and attending schools with high teacher turnover and substitute teacher rate. However, the Afterschool Program for Elementary School Students focuses on students from low-income families, those with special needs, and Taiwan Aboriginal families. The Hand in Hand Afterschool Program, plans to focus initially on students who come from low-income families and evidence low academic achievement ('low and low' children) and targets students who are Taiwan Aboriginal students, special needs learners, children of new inhabitants, low income, and being looked after by grandparents. In 2013, the MOE added three additional requirements, so that it would correspond with the *12-Year Basic Education Policy*. These included (1) that students should achieve an overall assessment score with a percentile rank lower than 35; (2) that percentile rank for any subject is lower than 25 in urban areas and 35 in rural settings, and (3) the average score of the High School Entrance Exam be lower than a percentile rank of 10 based on more than 25 % of the total enrollment of the schools (MOE 2014).

To interpret and classify the current typology of disadvantaged students, Sheng Yao Cheng (2011, 2013) collected data from journals and books, and conducted research on disadvantaged students and their interaction with educational policies using a questionnaire survey and group discussions. After 2 years of data collection, Cheng outlined five types of disadvantaged students: economically, culturally, educationally, based on their family background, and individually disadvantaged.

5.3 Disadvantaged Students, Afterschool Programs, and Remedial Teaching

After discussing definitions of minority and disadvantaged students, we move to a discussion of issues relating to disadvantaged students and remedial teaching. In the United States, the Family Involvement Partnership for Learning and Educational Resources Information Center (1999) pointed out that most disadvantaged students have similar problems with their learning and living adjustments. Belle (1999) considered that the struggle tutors face in afterschool programs is that students lack motivation for learning and often have little or no family support. Chaiken and the National Institute of Justice (1997) discovered that children from at-risk families face educational struggles like poor academic achievement, a negative attitude to learning, weak verbal skills in conversation, low self-confidence, struggles with cultural adjustment, and poor problem solving. Disadvantaged students encounter many problems in their daily lives with their learning as well as their self-adjustment, and these difficulties are closely related to their personal or cultural backgrounds.

Similarly, according to Crosnoe (2005), disadvantaged students experience a range of difficulties including lower overall academic achievement, poor performance in reading and math, academic frustrations, unfinished homework, and they require more support from parents and teachers. He observed that they may demonstrate totally different performance in the subjects they like when compared with those they do not. They also have difficulties with self and social control in their daily interaction.

Disadvantaged students may feel increasingly disappointed when learning a key subject like math. The challenges encountered may well make them want to give up. Beck (1996) indicated that lower-achievement students often forget the specific operation they should be carrying out, have trouble understanding the context of certain math quizzes, and lack learning motivation. Factors thought to influence lower-achievement students were social, school, and family ones. Social factors may include social ideology, value systems, and educational policies, which can have a great impact on students' math scores and achievement. Second, related to schooling, there were administration, teaching equipment, educational missions, teaching activities, quality of teacher, student-teacher relationship, and student interactions to influence the students' math learning. Third, students with a lower SES may lack materials and resources for learning. It is a priority to determine the underlying reason for poor school performance and then set up a series of remedial teaching strategies based on this knowledge.

Cheng (2010) interpreted the standpoints of Otto et al. (1973), and conducted his own research to outline the successful elements of remediation. These included developing the cooperation of learners, acknowledging the importance of both teaching and learning, memory assistance, providing feedback and reinforcement, making the learning meaningful, developing strong learning motivation, providing opportunities to practice, setting up successful experiences, and constructing proper scaffolding for the students to return to their home classroom. Currently, international

education policies for disadvantaged students' learning focus on the positive discrimination principle and consideration of remedial teaching materials, tutor education, and other support systems (Noam et al. 2003).

Most remedial teaching in Taiwan places emphasis on mastering content. Tutors in charge of remedial teaching use regular textbooks in the school, and the teaching methods employed would typically be to re-teach content for a second or third time (Cheng 2010). Furthermore, most of the schools that provide afterschool programs select the completion of homework as their major goal, and very few schools and tutors will prepare different kinds of learning materials. Key content typically centers on reading and math. Current literature, in contrast, suggests that remedial teaching should focus on the real needs of disadvantaged students, and use different kinds of teaching methods, materials, and learning activities to encourage students to learn automatically (Fashola 2002).

5.4 A New Approach to Remedial Teaching of Math

To provide a new way of thinking about remedial math teaching, the principal investigator implemented the afterschool program supported by the Yonglin Educational Foundation in 2007, then established the Institute for Disadvantaged Students' Learning (IDSL) at Yonglin Hope School in 2009. In 2014, there were 5000 disadvantaged students currently enrolled in this afterschool program. They take English and math classes for 1.5 h a day, for 4 days a week. The year is divided into fall, winter, and summer terms at the school. To make up for the gap of summer holidays, the Yonglin Hope School established an additional summer quarter every year.

To target the remedial teaching of math in elementary schools, IDSL first collected data on misconceptions regarding the learning and teaching of math that impact on disadvantaged students every day. Second, IDSL constructed and designed a set of remedial learning materials for math including textbooks, teacher guides, e-learning apps, and on-line evaluation systems. The third part was to provide a teacher training course. This involved a certification system with formal acknowledgement of afterschool tutors on completion of the course, and acknowledgment of professional supporting systems for afterschool programs.

5.4.1 Research on Remedial Teaching in Math

Since 2009, IDSL has detailed misconceptions regarding math learning and teaching based on information from published academic findings, on-site afterschool program field notes, and a monthly quiz for students designed to outline and scaffold math learning for disadvantaged students. The research team noted students' misconceptions during their math learning and detailed their tutors' math teaching each week. The main goal of this project is to develop a set of remedial math

materials, mentor training systems, and e-learning apps. Furthermore, the institute aimed to develop an alternative teaching/learning approach and methods to diagnose the real needs of the learners. IDSL ultimately hoped to reduce the learning struggles experienced by disadvantaged students, use appropriate learning materials, conduct remedial teaching, and evaluate the outcome of the afterschool program.

5.4.2 Develop Professional Resources and Supporting Systems for Remedial Teaching in Math

To develop professional resources for remedial math teaching requires inclusion of students' learning materials, teacher guides for tutors, remedial learning tools, and math evaluation questionnaires. According to Niss (2003), there are two key math competencies including handling mathematical symbols and formulae, and communicating in, with, and about mathematics. Handling mathematical symbols and formulae involves decoding and interpreting symbolic and formal mathematical language; understanding its relations to natural language; understanding the nature and rules of formal mathematical systems (both syntax and semantics); translating from natural language to formal/symbolic language, and interpreting and manipulating statements and expressions containing symbols and formulae. Communicating in, with, and about mathematics refers to understanding others' written, visual or oral 'texts', in a variety of linguistic registers about matters having a mathematical content, and expressing oneself at different levels of theoretical and technical precision, in oral, visual or written form, about such matters.

Based on this, the principal investigator and his team developed new remedial material for math learning covering number, measurement and shape sense. We also developed a school-based remedial math teaching and learning guideline to help tutors support students' learning.

5.4.3 Outcome Analysis of the Afterschool Program

To evaluate the outcome of the afterschool program and gain the support of parents and teachers, the institute cooperated with the National Academy for Educational Research to develop a standardized Grade 4 math exam in 2011–2012. The exam was used to compare the academic achievement and learning outcome of disadvantaged students with all other students in Taiwan. The data collection period took place over 2 years, and involved implementing the standardized exam (pre-trial, pre-test, and post-test). The principal investigator used anchor items in the official

Table 5.1 Comparison of 1,396 participants' pre- and post-test performances

		Pre-test			Post-test		
	Participants	Mean	PR	SD	Mean	PR	SD
Grade 5	773	217.07	26	44.85	234.63	38	47.96
Grade 6	623	234.56	38	47.02	247.35	48	49.44
Both grades	1,396	224.88	31	46.63	240.31	42	49.02

Table 5.2 T-test of the pre- and post-test

	M1 of pre-test	M2 of post-test	M2-M1	T-test
Grade 5	217.07	234.63	17.56	V
Grade 6	234.56	247.35	12.79	V
Both grades	224.88	240.31	15.43	V

questions to compare students against the national scale.[1] The test required students who had at least completed their Grade 4 math courses, so all the participants were in Grades 5 and 6 at that time. Table 5.1 outlines the learning outcomes of the disadvantaged students (n = 1,396) in the afterschool program. Their average math performance was lower than the mean national average (250) of all Taiwanese students. However, it should be noted that the mean at pre-test was 224.88, with a percentile rank (PR) of 31, and at post-test, it had increased to 240.31, with a corresponding PR of 42. This result represents a significant increase in the math performance of disadvantaged students.

Table 5.2 shows that all the disadvantaged students, irrespective of whether they were fifth or sixth graders, performed better after attending the afterschool program run by the Yonglin Hope School. The students in Grade 5 did better than the students in Grade 6.

5.5 Conclusion

Educators all around the world acknowledge the critical role of schooling in their learners' lives. In the long term, the nature of this schooling can contribute to their ability to access a higher social status, and thus it is only fair that all students have equal access to quality education. However, along with the M-shaped society, students may have totally different educational opportunities, and the divide between their social and economic supports has also become increasingly large.

After analysis of literature regarding disadvantaged students, minority students, afterschool programs, and remedial teaching all over the world, the principal investigator considered five categories of disadvantaged students: those who are economically, culturally, educationally, family, and individually disadvantaged.

[1] Where the mean is 250, and the standard deviation is 50.

To overcome the struggles that disadvantaged students face in the classroom every day, the researcher devised an afterschool program run by the Yonglin Educational Foundation and established IDSL at Yonglin Hope Schools. First, the research team collected data regarding learning styles and misconceptions about math from afterschool programs all over Taiwan. These were compared with existing math learning elements and research findings to highlight the realm of math learning in Taiwan. Second, the institute developed a set of remedial math learning materials. To date there are more than 5,000 students who come from backgrounds of both low SES and low academic achievement in math and who have participated in the afterschool program run by the Yonglin Hope Schools. There are three terms per year including fall, winter, and summer. During the school terms, disadvantaged students stay at school for an additional 90 min after regular schooling, 4 days and 1 week. This makes a total of 8 h extra schooling each week. In the summer time, students spend 6 h a day and 5 days a week enrolled in the afterschool program, which might more accurately be called the out-of-school program.

After 5 years of running the afterschool program at the Yonglin Hope School, parents and teachers remained uncertain about the outcome of the program. To demonstrate the quality of remedial teaching, the principal investigator conducted a nationwide math exam in 2011/2012. A total of 1,396 students participated in this exam. Outcomes indicated that all the disadvantaged students received benefits no matter what grade they were in. At the same time, the findings reminded us that remedial teaching needs to occur as early as possible. Math remains the subject that most of the students fear. However, when different teaching and learning approaches are used along with creative learning tools including digital and online games, it is possible to decrease the learning divide between advantaged and disadvantaged students.

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Chapter 6
Academic Self-Colonization and the Crisis of Higher Education in Taiwan and Mainland China

Kwang-Kuo Hwang

Abstract The phenomenon of academic self-colonization prevailing in the contemporary scientific communities of both Taiwan and mainland China can be traced to the three ideologies popular among Chinese intellectuals since the May Fourth Movement in the early twentieth century, namely, social Darwinism, scientism, and anti-traditionalism. Under the ideology of scientism, Chinese scientific communities concentrated on the indoctrination of various research methodologies in graduate education, while the neglect of the Western philosophy of science led them to ignore issues related to ontology and epistemology. As a consequence, most Chinese researchers tend to follow Western paradigms of research without significant contribution to theoretical construction.

6.1 Cultural Origin of Academic Self-Colonization

The cultural and historical origin of academic self-colonization, common in both Taiwan and mainland China, can be traced to the prevailing scientism in the era before and after the May Fourth Movement (Kwok 1965). Due to political chaos caused by civil wars among war loads in the early years of the Republic of China after the death of President Yuan Shikai in 1916, three popular ideologies prevailed among Chinese intellectuals, namely, social Darwinism, scientism and anti-traditionalism. A radical leader of the New Cultural Movement, Chen Duxiu (1917), argued that only democracy and science could save China from the crisis of dissolution. It seemed to him that traditional Chinese culture was essentially different from Western culture and they were absolutely incommensurable. Therefore, Chen (1919) advocated that "Mr. Confucius" must be replaced by two foreign Bodhisattvas, "Mr. Science" and "Mr. Democracy." For him, democracy was a vital weapon for frustrated youths to criticize the political chaos of China, whereas science was a

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crucial instrument to discard all the "darkness of ignorance and superstition." As a consequence, Westernization implied an ideology of radical anti-traditionalism (Lin 1979).

6.1.1 The Ideology of Scientism

"Ideology" in sociology means a set of conscious and/or unconscious holistic and systematic ideas and beliefs regarding power, society and their relationships with the universe. It attempts to integrate and to subsume all components within the system under one or a few core values. Nevertheless, it is unnecessary for such a system to be examined for its truth or falsehood; the formation and acceptance of ideologies has nothing to do with their factual accuracy. A belief system of ideology is usually closed and exclusive of opinions outside the system (Shils 1981).

Scientism was the prevailing ideology among Chinese intellectuals before and after the May Fourth era. It pertained to the belief that natural scientific methods represented the only way to acquire reliable knowledge. Some true believers even worshiped science as the omnipotent savior without any doubt.

Hu Shih (1923) described the blind worship to science in China at that time, "There is one term which has acquired a supreme reputation in China within the last 30 years. No matter you understand it or not, no matter you are a conservative or a reformer, nobody dares to express any despise or ignorance in public. This term is 'science.' Whether such a zealous belief of the whole country is valuable is another question, at least we may say that none of those who identify themselves as new intellectuals dares to slander it" (Hu 1923).

Hu's sayings indicated that the term *science* had become a mysterious symbol for worship for most Chinese intellectuals at that time, much like a kind of new religion. It is in fact a zeal of scientism (Kwok 1965), but not science at all.

The ideology of scientism in combination with social Darwinism gave rise to radical anti-traditionalism in twentieth century China which was so persistent and dominant an ideology that it occupied the Chinese intellectual culture from the May Fourth era (1915–1927) to the Cultural Revolution (Lin 1979). During the Chinese Civil War between the Nationalists and Communists from 1927 to 1950, intellectual camps of both sides claimed their ideological "isms" (Three People's Principles and Marxism-Leninism, respectively) "scientific truths."

6.2 Academic Self-Colonization in Taiwan

At the end of World War II, all Japanese teachers in Taiwan were sent back to Japan. Their vacancies were soon occupied by Chinese elites taking refuge with the Nationalist Government in 1949. They also brought to Taiwan ideologies of the New Cultural Movement. The one party political system in the Cold War era further

provided social support for those ideologies. When the Communist government initiated a series of political movements in mainland China escalating to the Cultural Revolution, the Nationalist government in Taiwan pushed forward the Chinese Cultural Renaissance Movement as its antagonism. Such cross-strait politics fostered liberal intellectuals to consolidate their ideologies of the May Fourth period. They generally believed that it is necessary to fight against the cultural tradition in order to promote modernization through science and American democracy.

6.2.1 Methodology, Epistemology and Ontology

Prof. Yin Haiguang was a famous leader for the camp of liberal intellectuals. Teaching logics in the Department of Philosophy at National Taiwan University, he used it as an instrument to advocate for democracy and to criticize the Nationalists. His book, *The Future Perspective of Chinese Culture* (Yin 1966), criticized Chinese culture from the viewpoint of social science.

Yin's thinking had repercussions for liberals in Taiwan, as he taught logics and introduced philosophy of science to students at National Taiwan University. Nevertheless, he lacked a comprehensive and systematic understanding of philosophy of science. He utilized logics as a weapon for political and cultural criticism, but he seldom discussed how to use philosophy of science for academic research.

Western philosophy of science addresses issues of ontology, epistemology and methodology, reflecting a scientist's ontological presumption about the subject of study, in addition to examining the epistemological knowledge constructed on one's ontological presumption through various methods of empirical research. Notwithstanding, liberal intellectuals had established an academic tradition that indulged students in issues of methodology without intensive reflection on ontology and epistemology in Taiwan. Consequently, most Taiwanese graduate students tend to conduct empirical research following Western theories or paradigms, without knowing how to construct their own theories, far from challenging imported Western theories.

This approach of naive positivism can be viewed as a modern version of scientism. It is the cultural foundation of academic self-colonization. The side-effects and residue caused by the 410 Movement of Education Reform in Taiwan could be attributed to this mentality of scientism popular among liberal intellectuals at the time (Wellmuth 1944).

The mentality of scientism could be traced to the origin of Chinese cultural tradition *I-Ching,* which provided Chinese intellectuals a kind of cosmology but not ontology in the Western sense (Yu 2005). The cultural habitus as well as negligence of Western philosophy of science have trapped the Taiwanese/Chinese education model in academic self-colonization.

6.2.2 410 Movement of Education Reform

The Taiwanese education model for elementary and high schools had been characterized with state domination emphasizing on the doctrine of Chinese national spirit. English textbooks of natural and social sciences imported from the U.S. were common at universities; their translated or abridged versions were used in colleges and professional schools. Very few original researches had been done in the field of either social or natural science.

The Nationalist government lifted martial law after a period of 38 years in Taiwan on July 15, 1987. Various social movements emerged as a consequence of liberation from the long-term political suppression. Liberal intellectuals, mainly from National Taiwan University, organized a large-scale demonstration demanding for educational reform on April 10, 1994, soon after Taiwanese President Lee Teng-hui consolidated his control within the Nationalists. Leaders of the movement denounced the educational system as the main vehicle for the Nationalist government under the martial law. They deliberately excluded "conservative" intellectuals from decision-making and pushed forward a Nobel laureate in chemistry as the movement leader, launching such slogans as "establishing high schools and universities everywhere for eliminating credentialism."

The 410 Movement of Education Reform has had long-term and widespread impacts in Taiwanese society (Chou 2003; Chou and Ching 2012; Hwang 2003). In this article, I will concentrate my discussion on two obvious problems: (1) The crisis of university close-downs, and (2) The crisis of degradation for university education.

As a rule of thumb, a country usually has one university of 10,000 students for every million of its population (Tseng 2003, pp. 196–198), the proportion of students for university education and professional training is about 3:7. Nevertheless, the 410 Movement of Educational Reform in Taiwan has transformed almost all professional colleges and technical schools into universities; as a result, the number of universities jumped from 23 to over 160 within a decade.

The capacity of universities had expanded to accommodate almost all youngsters born after the baby boomers, which were about 40,000 per year around the 1970s. But, the newborn population has declined year by year and reached 20,000 per year in 2010. As a consequence of this sharp drop in birth rate, higher education is facing a crisis of closing down: it is estimated that more than one third of the current universities will close down before 2025.

6.2.3 Quality of Higher Education in Taiwan

The only way to alleviate this crisis is to recruit students from mainland China or Southeast Asia. If Taiwan is able to recruit 10,000 university students per year from those regions, it might save many universities. Nevertheless, what is Taiwan's niche for attracting foreign students?

The answer rests on the quality of higher education in Taiwan. As indicated earlier, most Taiwanese researchers harbor an ideology of scientism or naïve positivism, consciously or unconsciously, due to their negligence of the philosophy of science. Most graduate schools in Taiwan offer a variety of methodological courses while very few of them encourage students to ponder over ontological or epistemological issues. For instance, most professors ask graduate students to seek "hot research issues" for publication in international journals without inquiring about how theoretical knowledge had been constructed.

Taiwan has remained an academic colony of the U.S. since the end of World War II. American trained intellectuals had successfully created a culture of following American paradigms without much reflection. The 410 Movement of Education Reform had brought about rapid increase in the number of universities as well as abundant research funds from the National Science Council. In order to provide objective criteria for resource allocation, educational leaders established an evaluation system which encourages researchers to publish in SCI or SSCI ranked international journals (Kuo 2005). The Ministry of Education in Taiwan first announced "Statistics for the total numbers of SCI, SSCI, and EL articles published by universities, technical and professional colleges or schools in 2002" on October 20, 2003. Consequently, very few professors devote themselves to solve crucial academic problems or to deal with social issues of domestic significance. Instead, most of them encourage students to publish short and simple articles by following "hot issues" of Western paradigms published in international journals. If and only if their articles can be published in SCI or SSCI journals, all their deeds are justified. (Chou et al. 2013; Huang 2009)

6.2.4 Criteria for Academic Evaluation

Both Science Citation Index (SCI) and Social Science Citation Index (SSCI) were established by the Institute of Science Information to identify and evaluate promising journals that will be useful to SSCI subscribers, and to delete journals that have become less useful. In the West, the merit of a journal article to the scientific community is not evaluated by its citation alone. An institution may ask the author's peers to assess the substantial contribution of the article if necessary. When the system was transplanted to Taiwan, everything was modified. The impact factor of the *journal* where the article was published, rather than the citation of the *article* itself, took precedence. Very few institutions knew how to assess the substantial contribution of an article in a fair and objective way. Under such system, most young intellectuals have to maximize their quantity of publication in SCI or SSCI journals for the sake of job-seeking, promotion, or competition for research funds (Chou 2014). They seldom care about the substantial contribution of their work to the field or society at large.

In the West, a large proportion of research funds is provided by private foundations. In Taiwan, most researches in both natural science and social science are

financially supported by the government, particularly the Ministry of Education or the Ministry of Science and Technology. Hence, publication in SCI or SSCI journals becomes a major criterion for assessing one's academic performance when seeking research funds from the government. A junior researcher not only has to learn every means to paper publishing, but also to invite coauthors who might help attain research funds. Because the number of published articles might assist in one's promotion, many administrators with academic background are willing to serve as coauthors even if they provide no contribution to the published article.

6.2.5 Scandal of Peer Review Ring

SCI or SSCI publications have become a new stigma for survival in Taiwanese academia. Most researchers replicate Western research paradigms, just like the popular OEM (Original Equipment Manufacturing) model of mass production by utilizing imported equipment and technology in the earlier stage of Taiwanese industrial development, while the whole academic community lags behind in competence for assessing the substantial contribution of published articles.

A dramatic scandal broke out in July 2014 which divulged the irrational evaluation system for assessing academic performance in contemporary Taiwan. Chen Zhenyuan, a junior associate professor at Pintung Educational University, has published 60 articles in the *Journal of Vibration and Control* within the past four years. The journal later found out that he had opened 130 fake accounts in its submission system to create a "peer review ring" in which all the reviewers were actually he himself. All 60 articles were thus retracted by the journal. The Taiwan public soon found out that the Minister of Education, Jiang Weining, was coauthor to more than ten of those 60 articles (Ferguson et al. 2014)!

Minister Jiang first declared that he did not know Chen Zhenyuan personally, but he altered his statements from time to time before finally resigned under public pressure. Afterwards, the Ministry of Science and Technology found that Chen also created a "citation ring" under which a total of NT$12 million research funds was obtained from the Ministry over an eight-year period.

Chen's dramatic case indicated that the scientific community of Taiwan has lost its ability of making substantial assessment for academic performance after a long period of academic self-colonization and over-dependence on the number of SCI or SSCI publications. It is far beyond most people's imagination that Chen had magic power to create "high citation rates" for his own papers. Nevertheless, is academic self-colonization a phenomenon unique to Taiwan? Or is it also widely seen in mainland China?

6.3 Academic Self-Colonization in Mainland China

The above question can be partially answered by examining social changes in China. Soon after the death of Mao Zedong in 1976, Deng Xiaoping (1904–1997) abolished people's commune and restored the family system. He pushed forward four modernizations and launched the Policy of Reform and Opening Up in 1979. A series of reform were implanted, intellectuals who had been accused of "reactionary academic authority" during the Cultural Revolution resumed their social positions, while most colleges and universities reinstated their teachings, and thousands of graduate students were sent abroad. Confucian thoughts which had been downgraded during the Cultural Revolution were restored.

6.3.1 Crisis of Cultural Identity

However, those reforms could hardly resolve the crisis of cultural identity in China (Keith 2011). The Chinese academic tradition had been destroyed to a great extent by the Cultural Revolution. The emptiness of thoughts in the academic community was soon filled by junior intellectuals who returned from study abroad. They indeed acted as cultural mediators and transplanted various Western values and theories of individualism to younger generations. River Elegy, the influential 1988 CCTV documentary series which was said to have stimulated the Beijing Spring democracy movement as well as the Tiananmen incident, was a manifestation of the new value system (Spence 1981, 1990; Zhao 2001).

The structure of Chinese society has drastically changed as a consequence of market-oriented economic reform and opening up for more than 30 years. The capitalists and landlords who were completely eliminated during the Cultural Revolution have risen up again. Intellectuals who were denounced as "striking ninth category" then have reappeared as new social elites. Peasants and workers who were once claimed to be "the master of one's own affairs" are still drifting up and down at the bottom of the society. Under the persistent impact of ideological emancipation and Western individualism, the Chinese society is facing a crisis of spiritual meaninglessness. Income inequality and the extreme disparity between the rich and poor become more and more serious. The whole society is pre-occupied with the utilitarian *zeitgeist* of "putting money above everything." People do not believe in Communism any more. Schools do not know how to implement moral education. People generally feel spiritually empty, and they do not know what the meaning of life is.

6.3.2 Ontological Anxiety

Though contemporary China is capable of aiding the financial or economic crisis of other countries, its intellectuals are facing a serious crisis of cultural identity. As a rising power, it seems that China has advanced at an equal pace with other powers on the international stage. But, having gone through a series of historical and political setbacks, China has retained many dregs of capitalism and socialism which have apparently distracted Chinese cultural identity and resulted in its ambiguity. Without a clear cultural consciousness, China as a rising power knows neither the cultural force that might drive its rise, nor the cultural power that might support its sustainable development. All those problems can be termed the *ontological anxiety* prevailing in contemporary China (Lin 2011).

6.3.3 We Shall Overcome

Though many Chinese intellectuals are aware that transplanting Western capitalism into China without any screening may result in a serious cultural crisis, it is very difficult for them to find other ways to recover from the damage caused by the Cultural Revolution. Deng Xiaoping (1993: 43) once said, "Actual practice is the sole criterion for judging truth" at the beginning of Reform and Opening Up. He also said, "White cat or black cat, a cat that can catch rats is a good cat!" Those are pragmatic criteria utilized by Deng to pave his way through the Cultural Revolution. Most Communist cadres did not know how and where to go in the future. Therefore, there was another popular slogan at that time, "Wading across the stream by feeling the way." All those sayings implied that: "We shall overcome!" Hence, there was no valid and reliable theory behind the imperative Policy of Reform and Opening Up. Such a mentality could be described by another popular jingle at that era, "The mass go with cadres, the cadres go with leaders, leaders go with Xiaoping, and Xiaoping go with feelings."

However, the focus of pursuing the pragmatic national goal of rapid economic growth without an overall plan for a fundamental transformation has resulted in numerous serious unintended social consequences, including environmental pollution, income and social inequality, corruption, rising criminal rate, and so on. I will argue that all those problems might be solved by counter-balanced theories of autonomous social science.

6.3.4 Epistemological Confusion

Whenever I discuss issues of the indigenization of social science with colleagues from mainland China, most of them generally agree that China's development is "great in practice, but pale and weak in theory." There are three obvious disrupts in

Chinese modern academia: learning from America and Europe sporadically and unsystematically before 1949; one-sided learning from U.S.S.R. from 1949 to 1979; total westernization (like a hungry person who is not picky and choosy) after 1979. An increasing number of students are studying abroad each year. Some of them returned to China after graduation and transplanted what they had learned overseas. Most of them have to strive for survival under the pressure of a heavy teaching load and publication requirements. It is beyond the ability of the academic community to even digest what they have learnt from Western theories, not to mention the construction of innovative theory to challenge foreign theories. It is hard for schools at various levels of the Chinese educational system to find well-qualified teachers to teach Chinese culture. That kind of course might even be objected by the local right wing. Moreover, mainland China also adopts the evaluation system of valuing SCI or SSCI publications. Thus, most junior researchers just follow the easy way. They replicate Western paradigms of research blindly. Their research findings might be divorced from social reality, or could not be used to solve their own social issues. All those problems could be termed *epistemological confusion* (Lin 2011).

The aforementioned discourse shows that Taiwan and mainland China may experience different types of crisis in their higher education because they have gone through different developmental stages. Nonetheless, both of their crisis in higher education can be traced to the same cultural origin of scientism caused by a lack of comprehensive understanding of the philosophy of science. In the next chapter, I will illustrate that Taiwan now has a milieu of open society for constructing an education model of autonomous social science by multiple philosophical paradigms, which may eventually alleviate China from its ontological anxiety and epistemological confusion.

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Chapter 7
From Cultural Rehabilitation to Cultural Renaissance: Through the Education of Indigenous Social Science

Kwang-Kuo Hwang

Abstract In the previous chapter, I discussed the cultural origin of crisis in higher education in Taiwan and mainland China, namely, academic self-colonization which might be traced to the ideology of scientism formed during the May-fourth Movement period. In this article, I argue that the development of indigenous social science may result in a new model of Taiwanese higher education that could prevent its collapse by attracting students from mainland China to supplement the shortage of university freshmen caused by the rapid decreasing fertility rate of Taiwan in the coming years. On the other hand, the transmission of indigenous social science from Taiwan to mainland China may resolve the ontological anxiety and epistemological confusion prevailing in the Chinese academic community.

7.1 Struggle for the Development of Indigenous Psychology

Since devoting myself to the indigenization movement of social sciences in response to Prof. K. S. Yang's calling in the early 1980s, I soon found that the cause for the underdevelopment of social sciences in Taiwan was a lack of comprehensive understanding of the Western philosophy of science.

7.1.1 Philosophy of Science

The progress of science in the West after the Enlightenment has been mutually facilitated with that of the philosophy of science: Along with the progress of science in various fields, philosophers had contemplated on the essential nature of scientific activity so as to form the discipline of philosophy of science. The progress of

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philosophy of science may guide the development of scientific research. Therefore, Lakatos (1978) took the cue from a paraphrase of Kant's famous dictum and stated at the very beginning of "History of Science and Its Rational Reconstruction," "Philosophy of science without history of science is empty; history of science without philosophy of science is blind."

Nevertheless, since the end of the nineteenth century, most non-Western (particularly Chinese) students who studied abroad have concentrated on their chosen fields without paying close attention to either the progress of philosophy of science or its relationship with their specific disciplines. The long-term implantation of Western paradigms has resulted in a kind of academic self-colonization for the education of social science in Taiwan. Most social science researches were designated to accumulate empirical data under the guidance of Western theoretical models.

Because the quantitative approach of *naive positivism* had long been popular, psychologists dissatisfied with the mere accumulation of empirical data had turned to the qualitative approach by following the philosophy of phenomenology or hermeneutics. Though this approach may take some aspects of culture into consideration, the accumulation of either qualitative or quantitative data without theoretical construction still made the progress of social science both blind and empty. As such, I began to advocate for the approach of grounding theoretical construction for the indigenization movement of psychology on the philosophy of science. However, because most psychologists were unfamiliar with the Western philosophy of science, my approach hardly attracted any followers.

7.1.2 A Struggle

Eventually, a struggle between different approaches for the indigenization movement emerged in the scientific community of Taiwan. Because my approach was dramatically different from the popular empirical-statistical approach, when Prof. Yang was preparing to launch a new journal, *Indigenous Psychological Research in Chinese Societies,* in 1992, he asked me to write a target paper to discuss the future development of the indigenization movement. My article, "Interactionism and social exchange: Some methodological considerations for the indigenization of social psychology," thus served as the target paper to be criticized by several senior scholars invited by Prof. Yang (Hwang 1993a). However, it was really difficult for me to reply to some of their comments and criticisms, particularly those from Prof. Guoshiun Su, a senior professor of philosophy of science at Beijing University, who argued that, "*Scientific research programme* is mainly used in modern nature science, but not used in social sciences, especially not for social psychology or sociology. It is proposed by Lakatos as a historian of science to evaluate the various theories appeared in the history of science, but not used by the scientists themselves. Therefore, the indigenization movement of social sciences should not follow the philosophy of scientific research programme (Su 1993)."

Prof. Su's arguments were basically correct. In core Western countries where modern sciences originated, philosophy of science actually resulted from historians' or philosophers' reflection and evaluation on various theories in the history of science; it is not used by scientists themselves. Nevertheless, for peripheral non-Western countries like Taiwan or mainland China, why can we not take advantage of their experience by using philosophy of science to help us develop indigenous psychology or indigenous social science?

7.1.3 Logics of Social Sciences

Nonetheless, I was not trained in the field of philosophy. My understanding about philosophy of science was neither complete nor comprehensive at that time. Prof. Su was a senior scholar of philosophy of science at Beijing University. My academic performance at that time was too weak to defend my advocacy. The only way to refute his arguments was to strive for some remarkable achievements in order to demonstrate the practicability of my approach. Therefore, my reply to him was an article entitled "A deliberate reply with temporarily Silence" (Hwang 1993b).

Since then, to demonstrate my academic advocacy by concrete performances has become my persistent career goal. In order to achieve this goal, I indulged myself in reading classic works on philosophy of science. Meanwhile, I began to teach this course in the graduate school of psychology at National Taiwan University.

The experience of teaching philosophy of science enabled me to realize the importance of translating this field's classics into Chinese. Furthermore, without systematic and comprehensive understanding of the dialectical relationships among various philosophical paradigms of science, it is very hard for a Chinese social scientist to make fair evaluations about academic research, let alone genuine breakthrough in his/her own research work.

In order to help young scholars in both Taiwan and mainland China to understand the progress of Western philosophy of science, I spent more than 10 years writing *Logics of Social Science* (Hwang 2001, 2013), which addresses different perspectives on crucial issues of ontology, epistemology and methodology proposed by eighteen remarkable Western philosophers in the twentieth century. It is one of my eternal beliefs that in order to overcome the difficulties encountered in the work of theoretical construction, non-Western indigenous psychologists have to understand not only their own cultural tradition, but also the Western philosophy of science.

Because many disciplines of social science, particularly psychology, are characterized with both natural and social sciences, in order to construct culture-inclusive theories to solve the problems encountered in the development of indigenous psychology, it is necessary to adopt the approach of multiple philosophical paradigms to solve problems of various nature by the most appropriate philosophy of science. The first half of that book thus addressed the switch in the philosophy of natural

science from positivism to post-positivism. The second half expounded the philosophy of social science, including structuralism, hermeneutic and critical science.

7.2 Confucian Relationalism

It should be emphasized here that my *Logics of Social Sciences* was written for non-Western social scientists to solve the difficult problems encountered in developing their own social sciences, but not to reflect the holistic and complete picture of Western philosophy of science as a whole. In order to construct culture-inclusive theories by multiple philosophical paradigms, all those paradigms must be characterized by a common feature of ontological realism, rather than positivism or constructivism.

7.2.1 Face and Favor Model

Based on such a belief, I was appointed as the principal investigator of the *Project in Search of Excellence for Research on Chinese Indigenous Psychology* sponsored by the Ministry of Education in Taiwan at the beginning of 2000. Originally it consisted of 23 sub-projects designed to investigate various topics chosen by indigenous psychologists who were teaching in different Taiwanese universities. But, most of them were unable to meet the requirement (i.e. publishing at least two articles in international journals and two articles in domestic journals within 4 years of employment) during the first phase of this project, only eight of them worked into its second phase.

I have constantly indulged myself to resolving difficulties of constructing culture-inclusive theories in psychology by using various paradigms in the Western philosophy of science. When the project ended in 2008, I integrated findings from previous related research into a book entitled *Confucian Relationalism: Philosophical Reflection, Theoretical Construction and Empirical Research* (Hwang 2009). Its English version was published with a new title, *Foundations of Chinese Psychology: Confucian Social Relations* (Hwang 2012).

Based on the principle of "one-mind, many mentalities" (Shweder et al. 1998), I advocated in that book that the epistemological goal of indigenous psychology is to construct a series of theories that represent not only the universal mind of human beings but also the particular mentality of people in a given society. I explained how I constructed the theoretical model of *Face and Favor* which is supposed to represent the universal mind for social interaction, I then used it to analyze the inner structure of Confucianism and discussed its attributes in terms of Western ethics. In the remaining chapters of that book, I constructed a series of theories on the presumption of relationalism to integrate findings of previous empirical research on

social exchange, the concept of face, achievement motivation, organizational behaviors, and conflict resolution in Confucian society.

In each chapter of that book, I explained how the difficult problems encountered in the development of indigenous psychology can be solved by utilizing the major philosophical paradigms frequently used by different disciplines of social science, including post-positivism (psychology), structuralism (anthropology), critical theory (sociology), and hermeneutic (history). In other words, a genuine breakthrough for the development of indigenous social science can be achieved by the interdisciplinary integration on the basis of their philosophical grounds. I fully believe that this book has very significant meaning not only to domestic higher education, but also to the international academic community, so I decided to translate it into English with a new title, *Foundations of Chinese Psychology: Confucian Social Relations* (Hwang 2012).

7.2.2 Mandala Model of Self

I was elected as the first president of Asian Association of Indigenous and Cultural Psychology in its first international conference at Gadjah Mada University in Yogyarta, Indonesia, on July 24–27, 2010. In my presidential address delivered at its inauguration ceremony, I mentioned that Henrich et al. (2010a, b, c) from the University of British Columbia reported their findings in *Nature* and *Behavioral and Brain Sciences*, indicating that 96 % of samples of psychological research published in the world's top journals from 2003 to 2007 were drawn from Western, educated, industrialized, rich, and democratic (WEIRD) societies, which house just 12 % of the world's population. In fact, the psychological dispositions of such a WEIRD sample are very particular and unique.

Therefore, I criticized those theories of Western social psychology which had been constructed on the presumption of individualism as too WEIRD to be applied in non-Western countries. The mission of the Asian Association of Indigenous and Cultural Psychology is to initiate a scientific revolution by constructing a series of culture-inclusive theories on the presumption of relationalism to replace the Western theories of WEIRD psychology so as to help people of non-Western countries solve the various problems they encounter in daily life.

After the AAICP's first international conference, I also developed a *Mandala model of self* with inspiration and revelation from my third visit to the Borobudur Temple located at the suburban district of Yogyakarta (Hwang 2011a). In order to urge for the progress of indigenous psychologies in non-Western countries by theoretical construction, in addition to the collection of empirical data, I published *A Proposal for Scientific Revolution in Psychology* (Hwang 2011b) with the Mandala model of self as its first chapter.

Both the *Mandala model of self* and *Face and Favor* model are supposed to be universal. They can be used as frameworks for constructing culture-inclusive theories on self and social interaction, respectively, by any indigenous psychologist.

Thus, I do believe that my approach may contribute to not only Chinese education, but also to the education of most non-Western countries in the age of globalization.

7.2.3 Calling for Scientific Revolution in Psychology

Allwood and Berry (2006) conducted a large scale international survey to investigate the origins and development of the indigenization movement of psychology around the world. With his understanding of related issues as background, Allwood (2011: 5) published an article in *Social Epistemology* to challenge indigenous psychologists. In it, he described their definition of culture as a rather abstract and delimited entity that is too "essentialized" and "reified," as well as "somewhat old-fashioned" and "too much influenced by early social anthropological writings." In my response to his critical comments, I made a distinction between scientific microworld and lifeworld and argued that it is necessary for social scientists to construct scientific microworlds for the sake of pushing forward the development of social science (Hwang 2011b). Most scientific microworlds of Western mainstream psychology had been constructed on the presumption of individualism, which is incompatible with people's lifeworlds in non-Western countries.

Even in earlier collaborations, they recognized that Western mainstream psychology is a kind of indigenous psychology. Therefore, the theoretical construction in Western psychology also implies a reification of culture. My central question to Allwood's criticism is: Why is the reification of the Western culture of individualism a merit for the progress of psychology, while the reification of non-Western cultures by indigenous psychologists a mistake?

My stance of anti-positivism as shown in this article attracted attention from Dr. James Collier, the editor of *Social Epistemology*. As such, he sent two post-doctorate researchers to interview me; specifically, they asked me 15 questions concerning my perspectives on the development of indigenous psychology. The interview was published in *Social Epistemology* with the title, "Calling for Scientific Revolution in Psychology" (Evenden and Sanstrom 2011). This initiated my long-term debate with Allwood; as a result, we published a total of twelve articles for a period of more than 3 years.

7.2.4 Critical Realism

The interview enabled me to realize the similarity between my philosophical stance and that of *critical realism* proposed by Bhaskar (1975, 1978). Dr. Roy Bhaskar was brought up in London by his Indian father and British mother. He studied philosophy, politics, and economy at Balliol College, Oxford University. When preparing his Ph.D. dissertation, he realized that the economic development of developing

countries can hardly be explained by Western theories of economy, so he transferred to the field of philosophy with a special interest in integrating natural and social sciences.

Since *critical realism* is crucial for readers to understand how I attained the epistemological goal of indigenous psychology, I revised *Logics of Social Sciences* and added two chapters to introduce critical realism and to explain how I constructed culture-inclusive theories in psychology by multiple philosophical paradigms, respectively (Hwang 2013).

The philosophy for constructing scientific microworld is mainly a product of Western civilization after the Enlightenment. It has progressed very rapidly during the last half of the twentieth century, while remains heterogeneous to the lifeworlds of most people, especially those who were educated in non-Western countries. In order to improve the quality of graduate education in Taiwan, it is necessary to make a clear-cut distinction between scientific microworld and lifeworld; in addition, a systematic introduction of various paradigms of philosophy of science should be included in graduate programs. This book is expected to make some substantial contributions to this goal.

7.3 Culture-Inclusive Theories in Psychology

Soon after the publication of *Foundations of Chinese Psychology* (Hwang 2012), the Committee for Promoting Indigenous Psychology invited ten well-established cultural and indigenous psychologists to the international conference, "The Construction of Culture-inclusive Theories in Psychology," sponsored by the Institute for Advanced Studies in Humanities and Social Sciences, National Taiwan University, from June 1–2, 2013.

7.3.1 Paradigms of Mainstream Approach

Michael Bond, a pioneer psychologist who has opened up the field of Chinese psychology, published the first English book on Chinese psychology (Bond 1986), followed by two volumes of *Handbook of Chinese Psychology* (Bond 1996, 2010), which successfully brought the term *Chinese psychology* to the attention of the international psychological community. The latest version of *Oxford Handbook of Chinese Psychology* (Bond 2010), contains 41 chapters by 87 authors who intensively reviewed previous works on a variety of topics related to Chinese psychology.

Nonetheless, with a careful review of that book, Lee (2011) indicated that he: "Was somewhat puzzled and bothered by the fact that the book does not have a clear structure." It is thus difficult for readers to learn quickly about what is included in the book and to identify the chapter on a specific topic unless they go through the

whole table of contents carefully. “There is a general lack of theory in the whole handbook.” The topic-oriented chapters have done a great job in reviewing and reporting extensively empirical findings in the field regarding the Chinese people However, very few chapters offer indigenous theories of Chinese psychology. Most of them stay at the level of confirming/ disconfirming Western findings, referring to well-know cultural dimensions such as collectivism and power distance to explain the variation found, despite the openly stated effort to push for indigenous research. Moreover, most of the studies cited in the book simply “dichotomized their findings as Chinese vs. Western, failing to capture the much more refined complexity of the world.”(pp. 271–272).

I authored a chapter that offers indigenous theories of Chinese psychology in that book. As an old friend of Bond, he has always invited me to contribute a chapter when editing books on Chinese psychology. And I did so either as an author or co-author of a chapter.

Bond was invited to give an opening address at the 2012 conference, *The Construction of Culture-inclusive Theories in Psychology,* in which he reviewed his academic life. In his keynote speech, he also explicitly illustrated his approach for studying the psychology of Chinese people.

7.3.2 A Confrontation Between Two Approaches

This seminar witnessed a confrontation between the two approaches for studying indigenous psychology: pan-cultural dimension approach versus cultural system approach. Bond (2014) defended the pan-cultural dimension approach and argued that “we must develop measures of psychological constructs that are metrically equivalent across a host of cultural groups” in building models of interpersonal behavior. He also gave a list of well-known psychological constructs, including dimensions or domains of values (e.g., Bond 1988; Schwartz 1992, respectively), types of self-construal (e.g., Gudykunst et al. 1996), social axioms or beliefs about the world (Leung and Bond 2004), motives such as distinctiveness (Becker et al. 2012), and dimensions of stereotyping used by individual perceivers (Cuddy et al. 2009).

That is a typical derived etic approach of reductionism which has been frequently used by mainstream psychologists. Bond (2014) indicated that some of these adduced constructs have a provenance outside the mainstream and are non-WEIRD productions; they are indigenous in origin, but applicable pan-culturally. Such macroscopic approach of cross-cultural psychology tries to allocate various cultural groups in the world along one or several *universal* dimensions which constitute the scientific microworlds or psychological space constructed by psychologists.

All those pan-cultural dimensions could be said to be a kind of “culture-inclusive theories” in psychology. But, that approach does not treat any concrete culture as a cultural system. In “Indigenous psychology: Grounding science in culture, why and how?” Sundararajan (2015) strongly opposed such dimensional approach for

studying culture. She argued that such dichotomous dimensions as individualism versus collectivism, or independent versus interdependent self-construal, may perpetuate the long shadows of Orientalism in psychology. "The difference detected by the one dimensional measure may be a difference that makes no difference psychologically to the local culture" (p. 236). Therefore, she cited Fiske (2002, p. 87): "We [Western psychology] must transcend our ethnocentric framework and not just study how other cultures differ from the United States but explore what they are intrinsically," and advocated for using the complex models of cultural or system approach to replace the dimensional one.

7.3.3 A More Culturally Sensitive Future

Bond (2014) also acknowledged the importance of initiatives outside the mainstream WEIRD nations in extending the disciplinary compass of Western psychology. In the concluding chapter of his 2010 handbook, "Moving the scientific study of Chinese psychology into our twenty-first century: Some ways forward," he quoted a paragraph from Arnett (2008):

> The role of indigenous theorizing, then, is to enlarge our repertoire of constructs and theories in describing and explaining the human condition using scientific best practice. Their ultimate function is to demonstrate how, "Within the four seas, all men are brothers". Non-mainstream cultural groups like the Chinese can enlarge our conceptual ambit, and ground psychology in the whole of human reality, not just their Western, usually American, versions (p. 713).

The concluding chapter of *Handbook of Chinese Organizational Behavior,* which he co-edited with Huang (Huang and Bond 2012), was even entitled "There is nothing more American than research on Chinese organizational behavior" for the sake of urging his Chinese colleagues "to be more culturally sensitive." In fact, the Chinese version of a famous Confucian saying, "learning without thinking leads to confusion; thinking without learning ends in peril," was engraved on the book's cover.

7.3.4 Multiple Philosophical Paradigms

After the Conference, I selected four articles directly related to this issue and submitted them to the *Journal for the Theory of Social Behaviour*. The editor agreed that this is a very important issue, so he invited me to serve as a guest editor and to include more key scholars in this international debate. Eventually, eight articles were accepted for publication, including two of mine.

The first article compared my cultural system approach with the popular pan-cultural dimension approach (Hwang 2015a). It is relatively easy to use the available instruments as well as Western theories of mainstream psychology, but it is

very hard to understand my brand new approach. Therefore, I have to explain the philosophical foundation of the cultural system approach for studying indigenous psychology first. The second article illustrated how I used a two-steps strategy to construct culture-inclusive theories of psychology by multiple philosophical paradigms (Hwang 2015b). First, I constructed a universal *Face and Favor* model for social interaction and another universal *Mandala Model of self* on the philosophical basis of transcendental realism. Then I used them as frameworks to reinterpret pre-Qin Confucian classics by the method of hermeneutic. The culture-inclusive theories of Confucian *morphostasis* thus obtained can be used as a basis for studying its *morphogenesis* in Chinese history from the perspective of critical theory.

7.4 Three Breakages of Social Psychology

Zhai Xuewei, professor of social psychology at Nanjing University, presented an article entitled "On the integration of social psychology and sociology: An indigenous perspective" at the 5th International Conference on the Dialogue between Sociology and Psychology held by Shihxin University on March 15–16, 2012. He separated the progress of social psychology in China into three periods of 30 years: In the first 30 years before 1949, Chinese psychologists tried to introduce Western psychology into China and to conduct empirical research. All those efforts and activities almost ceased from 1949 to 1979. During the third thirty years after 1979, there exited a problematic situation of three breakages:

First, contemporary social psychology has almost no relationship with the first 30 years. Most scholars who had studied abroad are old or have passed away. They have gone through "leaving from the West, relearning from the Soviet Union, and returning to the starting point of self-denial." For new researchers, there is a general lack of academic tradition; they have "no tradition, no trends of development, or even no leaders. Everyone is doing his/her own research, and because one's personal research interest changes from time to time, very few of them are doing systematic research on the same topic persistently."

The second breakage comes from the two research orientations of Western social psychology. Some psychologists insist that it is a branch of psychology, while others prefer to treat it as a branch of sociology. This leads to a more serious problem. "Because no definite identity can be found within a short period of time, the consequence of course is everybody doing his/her own work without paying enough attention to others' research work." Social identity is an important research topic in social psychology. "But, its development in China is facing an identity crisis itself."

The third breakage exists between the research interests of social psychologists in mainland China and that of social psychologists in Taiwan and Hong Kong. Due to their long separation from the outside world, many Chinese scholars translated or wrote textbooks of their own. However, very few works of high quality can be found. Most are copies of American textbooks. On the other hand, Western concepts and theories were transplanted into the Chinese educational system. Overdependence

and imitation make many Chinese students believe that there is one system of theories, concepts, and methods of social psychology in the West, particularly in America. What Chinese scholars can do is using their theories and methods to study the reality in China. The problem of obvious cultural difference can be resolved by such techniques as revising the instruments of measurement.

7.4.1 A Niche Market for Taiwan

The issues facing contemporary Chinese academic community are very similar to those in the post-war stage in Taiwan. However, due to the three breakages caused by the Cultural Revolution, in addition to the domination of Marxist ideology in their education system, it is not easy for scholars in mainland China to find a way out. On the contrary, Taiwan had been free from the disturbance of the Cultural Revolution. The government has invested large amount of funds to support scholars to conduct research on indigenous social sciences in a free and open atmosphere. Through a series of reflections, criticisms and debates for more than 30 years, indigenous psychologists in Taiwan have sought out their unique philosophy to resolve all the difficulties encountered in the construction of culture-inclusive theories in psychology.

An academic movement may reach the stage of maturation once it finds its philosophical ground, unless someone finds a more robust philosophy to compete and replace it. Hence, the indigenization movement of Chinese psychology is marching towards maturation. Its experience of success may be applied to other fields of social science so as to establish an autonomous academic tradition of Confucian humanism to cast off the domination of Western social science paradigms by assimilating the essential product of Western civilization, namely, philosophy of science.

The difference between Taiwan and mainland China can serve as a niche market, for the next 10 years, the Taiwanese academic community may train a group of scholars on Western philosophy of science, before learning how to construct culture-inclusive theories of social science by multiple philosophical paradigms. They may attract graduate students from mainland China to study in Taiwan, or teach the approach of indigenous social science in China.

7.5 Autonomous Academic Tradition

Confucian humanism was first proposed by philosopher Mou Zongsan, who indicated that the development of Confucian culture has gone through three periods:

Pro-Qin Confucianism: represented by Confucius, Mencius, and Tsun Tzu (Xunzi).

Neo-Confucianism during the Song and Ming dynasties : represented by Zhou Dunyi, Zhang Zai, Cheng Yi, Cheng Hao, Zhu Xi, Lu Jiuyuan, and Wang Yang Ming.

Contemporary New Confucianism: Initiated by Xiong Shili, represented by Tang Junyi, Mou Zongsan and Xu Fuguan.

Mou Zongsan devoted himself to the reconstruction of Chinese culture. He believed that a new pattern of Chinese Culture can emerge if and only if the tradition of Confucian humanism, namely, moral tradition, academic tradition and political tradition, can be established successfully. According to him,

> The affirmation of moral tradition means reconfirming the value of moral religion so as to guard the origin of universe for human living as revealed by Confucius;
>
> The initiation of academic tradition so as to form the subjective academic knowledge by incorporating the Greek tradition;
>
> The continuation of political tradition with the assimilation of Western democracy on the ground of autonomous academic tradition and subjective knowledge.

7.5.1 From Cultural Rehabilitation to Cultural Renaissance

Moral tradition is a religion of morality; the core of academic tradition is science, political tradition, democratic politics. Mou Zhongsan insisted that moral tradition is a learning for sage; it is the source for cultural creativity more fundamental than scientific knowledge. Both the academic tradition and political tradition are destined to decline without the support of moral tradition. Therefore, the establishment of these three traditions means a genuine accomplishment of Confucian humanism in the third period of its development.

For Mou Zhongsan, Confucian moral tradition is a strong aspect of Chinese culture. A new pattern of Chinese culture can be formed by assimilating Western science and democracy. Mou's life-long academic effort focused on the development of Confucian humanism in a systematic way so as to reaffirm the moral tradition of Confucian culture. The assimilation of Greek tradition for the foundation of autonomous academic tradition with subjective knowledge must await for the concreate accomplishments of the indigenization movement of social science.

After the traumatic experience of the Cultural Revolution, a period of Cultural Rehabilitation has to be carried out by the indigenization movement of social science which can be made possible only by a group of Chinese social scientists with sensitivity in both Eastern and Western cultures. The ontological anxiety and epistemological Confucian prevailing in the Chinese academic community can be alleviated only if an autonomous academic tradition can be established to escape academic self-colonization.

7.6 Conclusion

In *Origin and Goal of History*, German philosopher Jaspers (1949/1953) described the period of 800 to 200 B.C. as the Axial Age, in which a number of thinkers had emerged in four places: Ancient Greece, the Middle East, India, and China. With

profound influence on future philosophies and religions, they created cultural characteristics common to each area without any direct transmission of ideas from one region to another. The four paradigmatic philosophers were Socrates, Jesus, Buddha and Confucius, respectively.

Buddhism was transplanted to China during West Han (28–75 A.D.). It had been integrated with Confucianism and Taoism to create a new civilization. On the other side of the planet, the Crusaders, sanctioned by the Roman Catholic church in 1095, with the stated goal of restoring Christian access to holy places in and near Jerusalem, followed a 200-year struggle with seven major crusades and numerous minor ones. In 1291, the conflict ended in failure with the fall of the last Christian stronghold in the Holy Land at Acre. The frequent callings of the Crusade stimulated not only developments in secular government, but also interregional communications between the West and Middle East. Until then, Europe had been a primitive backwater, isolated from other civilizations and lost in its dark age. By the end of the crusading venture, the assimilation of Greek culture had transformed Christian Europe on a course to overtake its rivals and achieve world hegemony through the Renaissance of the fourteenth century, Enlightenment of the sixteenth and seventeenth century, and Industrial Revolution of the eighteenth century.

China was defeated in the Opium War (1839–1842), which marked the start of a "Century of Humiliation." A series of failures against foreign invasions had trapped China in internal turmoil and external threat. It was thus very hard for the Chinese intellectual community to contemplate on issues related to the philosophical foundation of cultural difference between East and West.

As a rising global power of the twenty-first century, China is deemed to establish a new education model for its intellectuals to accommodate the essence of Western civilization on the cultural foundation of Confucianism, Taoism, and Buddhism. In view of this trend, Taiwan may establish an education model for the promotion of autonomous social science by *multiple philosophical paradigms*. This may eventually alleviate China from its ontological anxiety and epistemological confusion.

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Part II
When East Meets West

Chapter 8
A Chinese Approach to Learning? A Comparative Study on Time Use Patterns of 15-Year-Old Students in PISA 2012

Yisu Zhou and Dan Wang

Abstract Under the influence of Confucianism, the Chinese society puts more emphasis on effort than on innate ability to account for academic success or failure. As time for learning is a strong indicator of effort, it is expected that Chinese students would spend longer time on learning than their peers in other educational systems. The time use pattern may be an important way to distinguish the Chinese education from educational traditions in other cultures. In this study, we analyze the time use patterns of 15-year-old students in 18 high-performing education systems in PISA 2012. The data show commonalities among four Chinese societies—Hong Kong, Taiwan, Macao, and Shanghai—that students in all four Chinese societies spend long hours on deliberate learning in school, with a focus on reading, mathematics, and science. This pattern distinguishes them from many OECD countries. Additionally, our analysis also reveals intracultural variation. Outside the regular school hours, students from Shanghai and Taiwan dedicate a considerable amount of time to out-of-school-time lessons. In particular, Shanghai students spend much more time on unguided homework, whereas in Hong Kong, Macao, and Taiwan, more importance is given to guided homework and tutoring. In sum, our findings suggest that the Chinese tradition of effort-emphasizing learning approach continues in the modern time, sustained both in and out of school. The extra learning outside school, however, exhibits a new trend indicating the decline of parental guidance.

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8.1 Introduction

In 2009, Shanghai students, representing mainland China to participate for the first time in the Programme for International Student Assessment (PISA), amazed the world by their phenomenal achievements in all three tested subjects, outperforming their peers in other countries by exceptionally large margins. With the stereotypical image of rote learning and exam drilling in China's schools, some commentators remained suspicious about the results by questioning the validity of the assessment in measuring true abilities in the tested domains. Three years later, Shanghai responded to the skepticism with another victory in PISA 2012 for its outstanding performance. The two rounds of PISA results have attracted attention from policy-makers as well as educational researchers and stimulated another round of keen interest in educational practices in China (Tan 2013; Tucker 2011).

In fact, there has long been research interest in the USA to understand the Chinese model of education in order to explain the learning gaps between China and the USA. In the 1990s, Stevenson and Stigler (1992) pioneered the comparison between the American, Japanese, and Chinese education systems. Schools in Taiwan were found to be more efficient in the sense that children could achieve higher learning outcomes even with larger class sizes, usually 38–60 compared with the sizes of 20 or below in Western schools. Differences in belief and culture arguably accounted for the learning effectiveness. One of the fundamental distinctions lied in the emphasis on ability or on effort. The American society was inclined to attribute learning outcomes to children's innate ability, whereas Chinese and Japanese parents, teachers, and children were found to believe that learning gaps were primarily caused by various levels of children's effort. Stevenson and Stigler (1992) argued that such emphasis on effort derived from the Confucian philosophy, which rejects categorization of human beings by innate good or bad nature and is interested in moral perfection of all individuals. This argument is echoed by later studies that educational systems under the influence of Confucianism share the emphasis on effort more than innate ability (Tweed and Lehman 2002; Biggs 1998). Similar patterns are discovered among the Asian Americans in the USA recently. Hsin and Xie (2014) find that academic effort exerted by Asian-American students best explains the learning advantages of Asian over White Americans and that such differences in academic effort is further attributed to the cultural beliefs of the two groups in the connection between effort and achievement.

The belief in effort may affect school achievement through the function of learning time. Time was identified as a crucial factor influencing student achievement as early as in the 1960s in the Carroll model (Carroll 1963, 1989). In addition to *aptitude*, *quality of instruction,* and *ability to understand instruction*, student learning is subject to the impact of *opportunity to learn* and *perseverance*. Opportunity to learn refers to the amount of time allowed for learning, for example, in the school sched-

ule. Perseverance is the amount of time a student is willing to spend on learning, which can be indicated by the student's learning time after school, such as homework and supplementary tutoring. Indeed, empirical evidence shows that time for learning, a variable combining "time on task," "opportunity to learn," and "homework," has the largest effect on academic achievement (Seidel and Shavelson 2007). In contrast, reforms that erode instructional time in school adversely influence students' learning in urban school district in the USA (Smith 2000). Further, reducing instructional time in school diminishes students' opportunity in mastery of complex concepts (Clark and Linn 2003). Therefore, the Carroll model offers time as a useful parameter to understand the academic advantages of Chinese students. As time invested in learning is a direct manifestation of effort, Chinese students are expected to spend longer time on learning both within and outside school.

The proposition has been confirmed by some empirical evidence. With the Confucian culture promoting effort, Chinese educational systems provide longer learning time by design, in terms of school schedule. In the 1990s, Chinese elementary children were estimated to spend 240 days or between 1400 and 1700 h a year in school, compared with only 180 days or 1100 h of their American counterparts (Stevenson and Stigler 1992, p. 142). The total learning time at school was about one to two school years longer in Chinese elementary schools than in American schools.

Additionally, the learning time extends to after-school period in the form of homework. Chinese students were found to spend approximately 13 h per week on homework compared with about 4 h per week for American students (Stevenson and Stigler 1992, p. 55). It was common that Chinese teachers assigned homework for students to complete even in winter and summer vacations (Chou and Ching 2012), a practice that would be "inconceivable" for American students (Stevenson and Stigler 1992, p. 55).

On top of the compulsory learning time and activities required by school, Chinese students were also found to be active in participating in cram schools or supplementary tutoring. The expansion of the tutoring industry is particularly conspicuous in Chinese societies, such as Hong Kong, Taiwan, and the Mainland China. In the Mainland China, a survey of 4472 urban households has found 73.8 % of primary students receiving tutoring versus 65.5 % and 53.5 % of junior and senior secondary students (Xue and Ding 2009). Similarly, a 2001 survey of 20,000 middle school students in Taiwan, China, indicated 72.9 % of grade 7 children received tutoring for 6.5 h each week on average (Liu 2012). Participation in supplementary tutoring indicates the commitment to learning and the effort that students are willing to make in academic achievement (Bray 1999; Bray and Lykins 2012).

In sum, time for learning may be a distinctive feature of the Chinese educational system because of the strong Confucian belief in effort. Though student time usage on learning activities has been extensively studied cross nationally in western societies (Dettmers et al. 2009; Trautwein 2007; Trautwein and Köller 2003; Trautwein and Lüdtke 2007), insufficient research attention was devoted understanding

whether time plays a unique role in the Chinese way of education. The citations above show that the specific statistics are available only for the 1990s and only Taiwan was selected as the representative of Chinese education in Stevenson and Stigler's study. Has the pattern identified by Stevenson and Stigler persisted today and throughout various societies in Greater China? How do Chinese students become more similar or different to their peers in other non-Confucian heritage societies in the new context of globalization and convergence of educational policies? This chapter will explore the answers to these questions through comparisons both within different Chinese societies and between Chinese and other Asian and Western countries.

8.2 Data

We used data from the Programme for International Student Assessment 2012 (PISA 2012). PISA is one of the largest international comparative projects in education, conducted by the Organization for Economic Cooperation and Development (OECD). It tests the skills of 15-year-old students in three subjects: mathematics, reading, and science. Four Chinese societies participated in PISA 2012: Hong Kong, Macao, Taiwan, and Shanghai. PISA utilized a two-stage stratified sampling design to collect representative data on 15-year-olds who are still enrolled in schools (OECD 2014). In the first stage, schools were selected systematically with probability proportional to size. In the second stage, at least 35 students were sampled with equal probability within each selected school (OECD 2014).

8.2.1 Countries for Comparison

In addition to the four Chinese societies, we also include several other countries as points of comparison in our analysis. The criterion of selection is high performance in the PISA 2012 assessment. We select countries that scored consistently above the OECD average in all three subject areas. By forming our baseline from a comparison of high-performing countries, we can develop a better understanding of the role of time use in shaping Chinese students' learning process. Our selection criterion leaves us with four Asian countries and ten OECD countries (Table 8.A1).

8.2.2 Variables

In our study, we focus on two sets of time usage variables. The first set of variables measures time usage on what the OECD calls "deliberate learning activities" (OECD 2011, p. 20), particularly regular classes on the tested academic subjects of

reading, math, science, as well as on other subjects. The second set of variables measures time usage on additional learning activities that take place outside classroom settings, including out-of-school-time lessons and what we call "after-school learning activities." While time use on deliberate learning activities is driven by structural forces such as the length of the school day and is thus seen by some as a more suitable tool for addressing educational equality issues (OECD 2011), learning activities outside classrooms, our second set of measures, are equally important and, in our view, heavily influenced by the sociocultural milieu. Competitive exit exams may contribute to the demand of tutoring lessons for many students, while class-specific preference may lead to differentiated participation in enrichment or remedial type of activities. The role these activities play in shaping learning outcomes in Chinese societies is not clearly understood.

Both sets of variables are taken from the PISA student questionnaire. The variables in the first set are `st69` and `st70`. These items ask students to recall the length in minutes of a typical class period and the number of class periods they have each week. We use such information to calculate the number of weekly instructional hours on different subjects.

The second set of variables consists of `st55` and `st57`. There are four subquestions for `st55`, which ask students to estimate the number of hours they spent on out-of-school lessons per week. The original items are categorical; we have converted them to a continuous format using the method described in another study (Zhou and Wang 2015). The six subquestions for `st57` ask students to estimate the number of hours usually spent each week on additional learning tasks. We sort these activities into four broad categories: unguided homework, guided homework, studying with parents, and receiving tutoring. These two items measure overlapping, albeit different, types of activities: the out-of-school lesson questions focus on lessons as the major form of activity, regardless of the nature of such lessons, while the after-school learning activity questions cover a wider range of activities and tasks with a specific purpose.

The definition of each variable is given in Appendix Table 8.A2.

8.3 Analysis

8.3.1 Learning Time in School

We first examine student time use inside schools (i.e., deliberate learning activities). We distinguish two types of time use: that spent on the tested subjects (reading, mathematics, and science) and that spent on other classes. This distinction yields a typology of countries with four categories (see Fig. 8.1):

1. More absolute learning time overall and more relative learning time on tested subjects

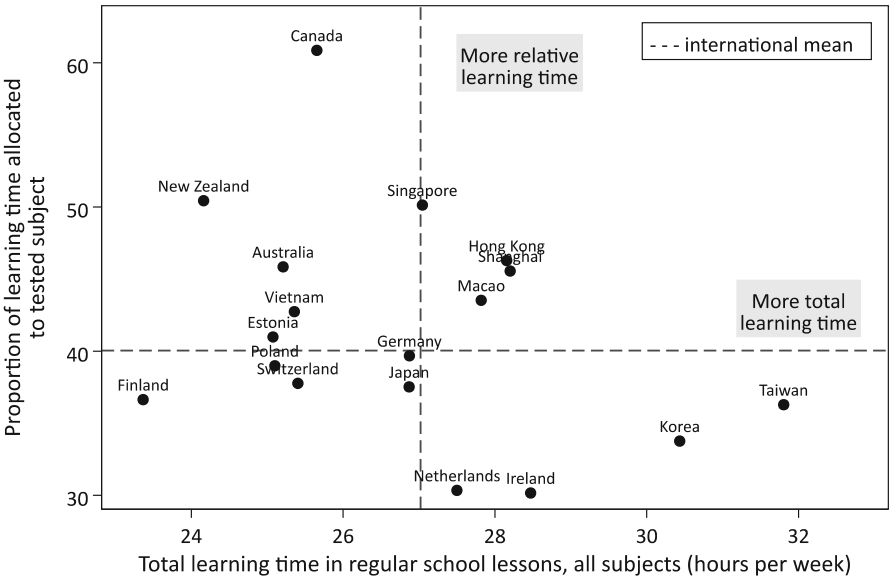

Fig. 8.1 Relative learning time on testing subjects versus absolute learning time in regular class hours

2. More absolute learning time overall and less relative learning time on tested subjects
3. Less absolute learning time overall and more relative learning time on tested subjects
4. Less absolute learning time overall and less relative learning time on tested subjects

First, all four Chinese societies are characterized by "more absolute learning time," since the amount of regular school hours in all four surpassed the international average of high-performing education systems (i.e., all four lay to the right of the vertical x-reference line). Among the four regions, Taiwan registered the highest number of hours (31.8). The long deliberate learning hours are not unique to Chinese societies; they are also common in other Asian countries such as Korea, Singapore, and Japan.

Second, beyond their longer hours, Chinese education systems tend to have a clear focus on the tested subjects (Category 1), except for Taiwan (Category 2). It should be noted that the PISA definition of the tested subjects differs from actual tested subjects in most Chinese societies, where English is most likely considered a core academic subject alongside reading, math, and science. Therefore, by using PISA's definition, we actually underestimate the proportion of deliberate learning time devoted to academic subjects. One would expect an even stronger focus on

academic learning in Chinese societies in practice. The pattern of time allocation within deliberate learning activities in Singapore is very similar to that in Hong Kong, Shanghai, and Macao. In contrast, the pattern in Taiwan has more resemblance with that of Korea than with the patterns in the other Chinese societies.

This feature of Chinese education systems contrasts with high-performing OECD education systems, many of which have shorter deliberate learning hours and some of which even deemphasize tested subjects (Finland, Switzerland, and Poland, falling in Category 4). On the other hand, Canada, New Zealand, and Australia clearly follow the "shorter class hours but more focus on academics" model (Category 3). Students in these countries spend a higher proportion of their class time on academic subjects.

8.3.2 Learning Time Outside School Schedule

For the next aspect we analyze the time invested in after-school learning activities. We find that students in Chinese societies are likely to put in considerable extra effort outside of regular school time. This is illustrated in Fig. 8.2. Focusing on the three tested subjects, we compare the amount of time students in each system spend on these subjects in school and out of school. Again, we can categorize the systems into four types:

1. More learning time on tested subjects in school and out of school
2. More learning time on tested subjects in schools but less out of school

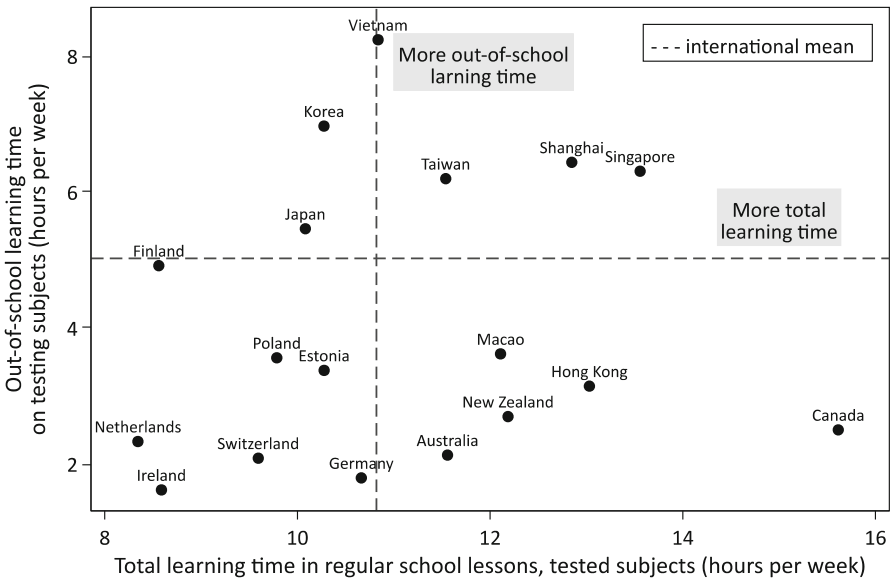

Fig. 8.2 Time spent on tested subjects outside school and in regular school time

3. Less learning time on tested subjects in schools but more out of school
4. Less learning time on tested subjects in schools and out of school

Consistent with previous findings, students in all four Chinese societies spend a relatively large amount of deliberate learning time on the tested subjects. A difference is apparent in the time spent on extra lessons, with students in Taiwan and Shanghai taking more extra lessons in the tested subjects than students in Macao and Hong Kong. But even in the latter two regions, the time spent on extra lessons surpassed that in the majority of OECD countries. The time spent on extra lessons by students in Singapore is comparable to the time spent by students in Taiwan and Shanghai, and it should not come as a surprise that all the countries with above-average extra lesson consumption are Asian.

Based on Figs. 8.1 and 8.2, we conclude that the four Chinese societies share the common feature of long hours in regular school lessons. However, there are also important differences. Shanghai not only has a more clear focus on tested subjects in schools, but its students also put in considerable extra effort out of school. Hong Kong and Macao share the strong focus on tested subjects in schools, but their students take fewer out-of-school lessons in these subjects. Taiwan displays the opposite pattern: while schools deemphasize tested subjects, students are compensating through lessons outside schools.

The limitation of the out-of-school lesson rubric is that it does not reveal the nature of the extra learning efforts. Next we analyze how students spend their time in the course of after-school learning activities (see Table 8.1). These learning activities most likely occur after the end of the formal school day, and they can take a variety of forms. We break down the average number of hours spent weekly on each type of activity and the proportion that this represents of total time usage on after-school learning activities.

In this analysis, Shanghai stands out as unique, with Shanghai students spending the most time on after-school learning, 18.15 h per week. This high figure is due to long hours spent on unguided homework. On average, Shanghai students spend 11.66 h per week, more than 2 h per day, working on homework by themselves. However, in terms of relative time allocation Shanghai is not unique: the time spent on unguided homework accounts for 64 % of total after-school efforts in Shanghai, on par with the proportion in several other systems such as Finland, Germany, Ireland, and the Netherlands. It is the absolute time expenditure that distinguishes Shanghai students from those of other high-performing systems.

In addition, students in Shanghai seek guidance to complement their solitary work by spending an extra 2.5 h per week doing guided homework. This finding again distinguishes Shanghai from other education systems, even its Asian or Chinese neighbors. For instance, students in Vietnam also spend long hours after school on learning, but they are primarily investing in tutoring activities (personal or with a commercial company, Table 8.A2). Rarely do students in Vietnam work on their homework unguided. Singaporean students mirror Shanghai students in terms

Table 8.1 Time usage on after-school learning activities (absolute hours and relative allocation)

Designation	Country/region	Unguided homework	Guided homework	Studying with parents	Receiving tutoring	Total
Chinese societies	Hong Kong	4.98	1.23	0.50	1.70	8.41
		59 %	15 %	6 %	20 %	100 %
	Macao	4.30	1.96	0.56	1.67	8.49
		51 %	23 %	7 %	20 %	100 %
	Shanghai	11.66	2.49	0.76	3.23	18.15
		64 %	14 %	4 %	18 %	100 %
	Taiwan	4.34	1.27	0.90	2.18	8.68
		50 %	15 %	10 %	25 %	100 %
Asian countries	Japan	3.15	0.78	0.28	0.67	4.87
		65 %	16 %	6 %	14 %	100 %
	Korea	2.11	0.85	0.41	4.96	8.34
		25 %	10 %	5 %	60 %	100 %
	Singapore	7.57	2.41	0.87	3.03	13.89
		55 %	17 %	6 %	22 %	100 %
	Vietnam	3.78	2.89	1.75	6.46	14.88
		25 %	19 %	12 %	43 %	100 %
OECD countries	Australia	4.98	1.27	1.03	0.78	8.06
		62 %	16 %	13 %	10 %	100 %
	Canada	4.45	1.24	0.87	0.72	7.27
		61 %	17 %	12 %	10 %	100 %
	Estonia	5.45	1.54	0.92	1.42	9.32
		58 %	17 %	10 %	15 %	100 %
	Finland	2.31	0.47	0.44	0.19	3.41
		68 %	14 %	13 %	5 %	100 %
	Germany	4.48	0.20	1.02	1.05	6.75
		66 %	3 %	15 %	16 %	100 %
	Ireland	5.69	1.64	0.67	0.63	8.63
		66 %	19 %	8 %	7 %	100 %
	Netherlands	5.00	0.99	1.01	0.73	7.73
		65 %	13 %	13 %	9 %	100 %
	New Zealand	3.37	0.96	0.82	0.63	5.78
		58 %	17 %	14 %	11 %	100 %
	Poland	4.65	1.95	1.24	1.75	9.59
		48 %	20 %	13 %	18 %	100 %
	Switzerland	3.15	0.92	0.98	0.63	5.67
		55 %	16 %	17 %	11 %	100 %

of time allocation on additional learning activities. The distribution of time use on such activities is similar in the two systems, but students in Shanghai outspend their Singaporean counterparts in the unguided homework category by 4 h per week.

Students in Hong Kong, Macao, and Taiwan do not differ much from students in other high-performing systems, either in absolute terms or in terms of relative time allocation. The only variation is in the time spent on tutoring. The average number of hours spent on tutoring is generally higher in the three Chinese societies than it is in OECD countries, but lower than in most of their Asian neighbors.

Examining students' time usage on various after-school learning activities is important to understand how students orchestrate their life outside school. In Fig. 8.3, we look at the amount of time students in each region spend on each activity category in relation to regular class time (expressed as a percentage). We stress the linkage between deliberate learning time and after-school learning time because additional learning is always relative. In many systems, after-school learning is a direct reflection of what students are taught in classrooms. Students may seek additional clarification of what they have been taught at school, or they may be compelled to review school lessons and to complete their homework. The numbers in Fig. 8.3 are a reflection of extra effort made outside of regular academic classes. Shanghai, Singapore, and Vietnam are the three education systems in which students spend at least 50 % more time on learning beyond regular class hours. But there are two important distinctions.

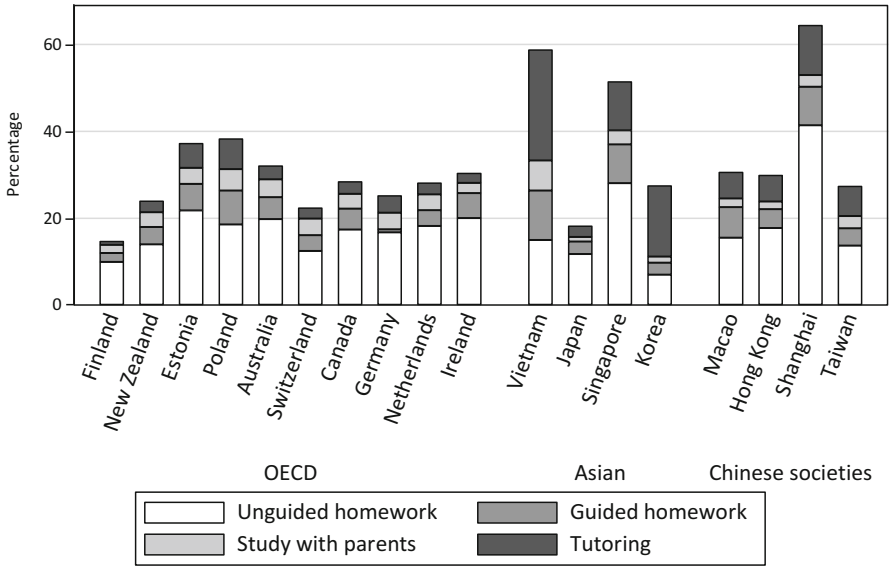

Fig. 8.3 Relative allocation of time on after-school learning activities in relation to regular school hours

First, students' total in-school learning time in Vietnam is lower than that in Singapore and Shanghai (Fig. 8.1). This suggests that the Vietnamese students are likely to use after-school programs to supplement what they have learned in school. In Singapore and Shanghai, by contrast, the after-school learning activities come on top of already long learning hours in school. In the Chinese context, this may reflect a pattern of putting the icing on the cake. Second, the patterns of time allocation are different in the three societies. In Shanghai, the bulk of the additional learning involves doing teacher-assigned homework. This scenario applies also to Singapore, though to a lesser degree. But the additional learning of students in Vietnam, probably reflecting its supplementary nature, is centered on tutoring activities, either with an individual or with a commercial company.

One commonality among Chinese societies is the reduced role of the parents compared to OECD countries, as indicated by the smaller proportion of time that Chinese students allocate to studying with their parents. It is possible that the greater popularity of guided learning centers and other complementary services outside schools has left parents feeling less compelled to take up the traditional role of their child's learning partner.

8.4 Discussion

In this chapter we have investigated students' use of learning time in four Chinese societies and compared it with patterns in other high-performing Asian and OECD countries. Our analysis reveals some unique characteristics of time use on learning activities in Chinese systems, but it also suggests that there is equally important intracultural variation. In some ways, the four Chinese societies are similar. The absolute amount of time spent on deliberate learning is high in all of these societies. Three out of the four systems have a specific focus on PISA-tested subjects, and the number of hours spent on tested subjects in the fourth system, Taiwan, also exceeds the international average. The combination of these two features distinguishes Chinese societies from other high-performing nations.

In addition to spending long hours on deliberate learning in school, the data show that students in two Chinese societies (Taiwan and Shanghai) also put in extra effort in out-of-school-time lessons. Scholars attribute the academic success of the overseas Chinese students from these societies to such activities (Hsin and Xie 2014). If we examine the relative allocation of time among different types of after-school learning activities, differences among Chinese societies emerge.

Shanghai students invest their time mostly in unguided homework, while students in Hong Kong, Macao, and Taiwan spend more time on guided homework and tutoring. Overall, tutoring has become increasingly important in Chinese societies, as students seek a second source of authoritative knowledge. Chinese societies are similar to other Asian societies in this regard, as the proportion of after-school

learning time devoted to tutoring is comparable in both groups and generally higher than in OECD countries. Unfortunately, the PISA data do not elucidate the nature of these tutoring classes. Students also seem to be seeking guidance on their homework, but they are doing so outside the traditional parent-student relationship. They may be working with each other, with senior students, or even with teachers. The prevalence of alternative avenues for learning could explain why studying with parents is less important for Chinese students than for students in OECD countries.

Time use pattern is linked with two aspects of student learning. On one hand, deliberate learning time is a direct reflection of institutional design of formal schooling inside traditional classroom, while on the other hand, after-school learning time represents personal investment in education taking alternative forms. The Chinese model of education thus reflects not only societal-wide emphasis but also echoes individual pursuit of education excellence. Yet from a time use perspective, this model of education, though it takes certain unique manifestation in Chinese societies, is found in other Asian systems.

Our analysis also leads us to single out the case of Shanghai. Shanghai students, ranked as the highest performers in PISA 2012, spend the most time on extra learning. In addition to classroom learning, Shanghai students put in an additional 18 h of learning per week, equivalent to extending school hours by 60 %. This learning pattern distinguishes Shanghai from all other education systems in our sample. On average, 15-year-old Shanghai students spend more than 14 h every week on homework. That is more than 2 h on a typical school day. According to the PISA questionnaire, this homework is by definition set by teachers. This means that the influence of school extends beyond regular class hours. The schooling experience in Shanghai (and to a lesser degree in other Chinese societies) must thus be seen as a continuous process that can take place in multiple places. This is a unique pattern and one that we believe is worth further investigation in the future. Though the emergence of a plethora of learning services could prompt the shift of locus of learning from schools to other venues, the story we have uncovered seems to suggest that school-initiated learning activities still dominate in Chinese societies. In a sense, then, the trend in these societies represents a reinforcement of the old model, not the invention of a novel one.

8.5 Limitations of This Study

Though PISA provides a nationally/regionally representative sample of 15-year-olds, we caution readers of potential perils caused by the quality of the data. Our concern stems largely from the instrument. The time use information is self-reported by students. Errors may occur when students attempt to recall their past time expenditure on various activities. Additionally, as Bray and Kobakhidze (2014) have pointed out, seasonal variations in participation patterns in certain activities are not captured by the PISA questionnaire. Therefore, one should expect some measurement errors in the statistics we report.

Other issues arise from the cross-cultural translation of the survey items. We considered this problem in an earlier study (Zhou and Wang 2015), and it is worth further discussion here. While in English terms such as "homework" and "studying" may refer fairly unambiguously to distinctive learning activities, there is little guarantee that such distinctions are preserved in cross-cultural translation. To our knowledge, the translation of survey items from English to different forms of Chinese is conducted by four independent PISA centers, and therefore the language used in each version may be different. Such divergence was indicated by our comparison of item wording across pilot versions of the student questionnaire. The comparison revealed differences in words used, potentially conveying different meanings. However, our request to examine final versions of the student questionnaire was not granted, and we were thus not able to confirm whether such differences were resolved in the survey. Since our analysis is secondary and we are not able to validate the data ourselves, we have taken the questionnaire items at face value and categorized them in ways that we believe are appropriate and meaningful. We also place our faith in the OECD quality assurance procedure. It is nonetheless possible that our categories are not mutually exclusive and that one may encompass part of another.

Appendix

Table 8.A1 Countries/regions of comparison in the sample

Designation	Country/region	PISA performance		
		Reading	Math	Science
Chinese societies	Hong Kong	545	561	555
	Macao	509	538	521
	Shanghai	570	613	580
	Taiwan	523	560	523
Asian countries	Japan	538	536	547
	Korea	536	554	538
	Singapore	542	573	551
	Vietnam	508	511	528
OECD countries	Australia	512	504	521
	Canada	523	518	525
	Estonia	516	521	541
	Finland	524	519	545
	Germany	508	514	524
	Ireland	523	501	522
	Netherlands	511	523	522
	New Zealand	512	500	516
	Poland	518	518	526
	Switzerland	509	531	515

Table 8.A2 Definitions of time use variables

Name	Definition	Construction
Total class periods	Total hours spent per week in class (minutes per class × number of class periods)	st69q01*st71/60
Tested subjects	Total hours spent on reading, math, and science classes	(st69q01*st70q01 + st69q02*st70q02 + st69q03*st70q03)/60
Non-tested subjects	Total hours spent on classes other than reading, math, and science	(st69q01*st71−st69q01*st70q01 −st69q02*st70q02st69q03*st70q03)/60
Out-of-school time lessons	Total hours spent on out-of-school-time lessons[a]	st55q01 + st55q02 + st55q03 + st55q04
Unguided homework	Homework or other study set by teachers and not carried out with somebody overlooking and providing help, either at school or elsewhere	st57q01−st57q02
Guided homework	Homework or other study set by teachers and done with somebody overlooking and providing help, either at school or elsewhere	st57q02
Study with parents	Study with a parent or another family member	st57q05
Tutoring	Work with a personal tutor (whether paid or not) or attendance in out-of-school classes provided by a commercial company and paid for by parents	st57q03 + st57q04

[a]After the conversion of categorical variable to a continuous scale

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Chapter 9
Chinese Higher Education Model in Change: Negotiation with Western Power

Weiling Deng

Abstract Although many scholars regard modern Chinese higher education as a mixed child of traditional Confucian values and Western paradigms of university construction, I would argue that it has been rich with perennial Chinese partisan characteristics. What those scholars have captured is the constant external influences that shaped the formation and reform of higher education in China. But they did not put the focal point on China's unusually collective effort to respond to the world, in which higher education plays a crucial role. It is this chapter's goal to extrapolate a contemporary Chinese higher education model that can be distinguished from the Western models through the philosophical diversity of, ideological totalitarianism over, and economic impetus within higher education. The foundation of such distinctiveness lies not in the higher education itself, but in the complex domestic and global sociohistorical context out of education in the twentieth century. The model in question remains Chinese because it was derived from the massive social mobilization since the earlier 1900s and guided by the urgent and ultimate goal of national development through optimal operation of all types of resource and centrality of power. Structural changes in Chinese higher education paralleled the series of tumultuous political and economic oscillation, which is unlike the models in the West. In imbibing, reforming, refusing, and re-joining the Western game rule, the trajectory of Chinese higher education is shaped by and contributes to the state's negotiation with Western power.

9.1 Introduction

The number and variety of studies on Chinese higher education in modern times are enormous. As China increasingly reintegrates itself to the global market of labor force and brain power, it becomes more interesting to discuss what indeed has propelled higher learning to its current situation and where it is heading to. Is it more Westernized in the benchmark fashion or returning to what is believed to be Chinese?

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As Ruth Hayhoe (1996) clearly stated in the beginning of her book, *China's Universities 1895–1995: A Century of Cultural Conflict*, Western studies on China's modern history too often "falls within the modernization discourse, with a scrupulous adherence to objectivity," and ignores "preferred directions for China's future" (p. xii). In comparison, researches within China hardly escaped the "perfunctory, even ceremonial" ideological framework of Chinese Marxism (*ibid*, p. xii). If I interpret her correctly, a comprehensive study of the development of Chinese higher education requires an insider's view that keeps a distance from the fundamentalist reference to partisan Marxism.

I mostly agree with Hayhoe, who later presented in that volume an admirable work of comparative studies on Chinese universities against the more widely known European models. What is clear with Hayhoe's contention is that the century from 1895 to 1995 could be divided into three periods according to the leading party's prior concern. The Nationalist period (1911–1949) was one in which the Nationalist Party attempted to lead the Chinese state to a democratic road and capitalist future. It witnessed the most active intellectual debates over upgrading education and greatest academic autonomy compared to the latter two periods. The socialist period (1949–1978) was dominated by China's Communist Party (CCP), a firm refusal of all Western capitalist values. Higher learning of liberal arts almost came to a full stop in those 30 years, whereas, influenced by the Soviet model, highly specialized hard sciences kept going to technologically support industrialization. It ended with the conclusion of the Cultural Revolution, which is known as the greatest persecution of Chinese intellectuals in modern time. With the Reform and Opening up Policy, China walked into the third, or Reform period (1978–present), in which both the economy and higher education stepped onto the fast track of development.

As we look back from 2015, 20 years after the book was concluded, the Chinese government has reinforced thought control over Chinese universities. There is simultaneously an eagerness to demonstrate its achievements in higher education to the rest of the world and a carefulness in joining the global discourse of competition while remaining politically cognizant of past struggle. Behind the dramatic ups and downs are clear parallels between higher education and politics in China. This identifies Chinese higher education's distinctiveness from the Western models that have had impacts on the former's modernizing road. This also requires us to reexamine the chronological divide of development and look for something that has overridden such divide and consistently impelled the entire scope of modernization process that includes higher education. Such a mechanism will stress the causality of all educational changes along with the parallel relation between political leadership and higher education.

More recent literature written in Chinese language contains a diversity of topics, ranging from historical overviews[1] to policy discourse analyses,[2] from issues of

[1] See Yang Dongping (2003), *The hard sunrise: the 20th century in China's modern education*.

[2] See Wen Wen (2013), *The formulation and transition of China's education policy from 1978 to 2007: a policy discourse analysis*.

university management and administration[3] to "cultivating" students' competence,[4] and from questions of equity[5] to debate over technology and marketization.[6] Only a few jumped out of the Marxism box described by Hayhoe. And even fewer ventured to seek for a sociology of higher education that not only counts and narrates the relevant personnel and events in the past, but also puts higher education into a larger picture of sociohistorical movement in which it is constantly shaped by the collective behavior and attitude of all actors – Chinese citizens. It is from this perspective, which sees higher education as a changing unit in massive social mobilization, that I weave together historical evidence of the leaders and recipients of this course to outline the model of modern Chinese higher education.

9.2 Historical Background

Higher education cannot exist without the people who make goals for it, who attend it (and also perhaps those who do not), and the nature and function of those two (or three) types of people. This requires that a thorough analysis of higher education take into consideration how people within a nation is mobilized.[7] It is the way Chinese people have been mobilized that distinguishes China from other countries, and consequently draws a boundary of Chinese higher education from other models. Even in recent decades when market competition penetrates higher education and other layers of daily life in China, the new trend does not contradict with Chinese people's materialistic attitude toward life and competition. But I will leave this for later discussion. Now I want to briefly introduce the historical background of the massive social mobilization starting from the end of the Qing Dynasty that resulted in the present principle, attitude, and role of higher education in China.

When imperialism and colonialism opened China's market and invaded its land, the Manchu government had neither ability nor willingness to mobilize the entire country, including a majority of the Han people, to fight against the Europeans and Japanese. For 267 years, Manchu's oppression over the Han people made itself a weak authority against external force and in the meantime deprived the latter of its old masculinity and sense of public responsibility (Barbarian Warrior[8] 2014).

[3] See Zhu Xiuying (2013), *Innovative studies on higher education institute management*.

[4] See Pan Maoyuan (2011), *Theories and practice of the training of application-oriented talents*.

[5] See Yang Dongping (2002), *The tilted pyramid*.

[6] See Cheng Pingyuan (2013), *Investigation of China's educational problems*.

[7] It needs to be noted that when higher education is treated as an analytical unit, it entails one to treat economy, politics, demography, industry, law, and other macro social sectors as equivalent analytical units to see how the whole state is operated. But here, I use massive social mobilization as a lens to examine how the power of people, as actors within higher education, has been employed to modernize the nation amidst international pressure.

[8] Barbarian Warrier is the pseudo-name of an unknown author who became popular of his penetrating explanation of world macroeconomics by the end of 2014. His/her name would be later referred to as BW.

The last dynasty ended without a real nationwide struggle against colonial invasion. Many intellectuals at the time could not allow themselves to do nothing but seeing the nation sliding steadily to death. From their eye-opening study abroad experience, they found two feasible ways to rescue the country by organizing as much resource as possible. One, following Europe and the USA, was an elitist mode run by well-educated republicans who were propertied with material resource. The other, modeled by the Soviet Union, was a socialist revolution that could mobilize the widest lower class – proletarian peasants (Hayhoe 1996; BW 2014). The Nationalist Party neither had reached the most basic needs of the largest peasant population – the ownership of the land – nor had it managed to avoid corruption. The two fatal weaknesses gave their opponent the opportunity to take over the power. Moreover, the early 1900s was a time that demanded nationwide action instead of a game played within an enclosed community, however wealthy and well educated it would like to be.

It was in the strong emotion against colonialism and imperial traditions that modern Chinese universities were established and gradually expanded under the leadership of returning overseas scholars. For nearly half a century, there lacked an effectively centralized authority to control over intellectual activities, which gave newborn universities a good space of autonomy and development. But ideological confinement did begin before 1949. Moreover, in 1905, the imperial exam came to an end, signifying the abandonment of an intellectual-centered society that had constructed its core values along the passage of officialdom through schooling (Xu 2005). This watershed event gave birth to a new society in which people with knowledge could approach a great variety of professions to exert their influence, instead of depending on government positions. Different schools of thoughts bloomed after the May Fourth Movement of new literacy in 1919, presenting both an active and critical welcome of Western and Japanese scholarship and philosophy of education. The characteristic and major accomplishment in this period was liberal education imported from the capitalist West (Tong 1991; Hayhoe 1996). But despite the many epochal achievements in higher learning, the pursued doctrine of science and democracy could barely be institutionalized to the vast landscape of China where illiterate rural area comprised the absolute majority of the entire territory. The rural land had been pregnant of the most fundamental Chinese customs and habits and was incubating a proletarian revolution of historical record.

Mao Tse-tung did an unprecedented work in congregating and organizing the overwhelming majority of Chinese people, mostly impoverished peasants. This movement was nevertheless a double edge sword, having centralized most labor force and production from individuals under the “dream” of “state socialism” (BW 2014). On the one hand, it succeeded in equipping the whole country so that it survived all international wars. On the other hand, the energized population could not be controlled but only be consumed and dwindled by a series of domestic conflicts that claimed the lives of imagined enemies, including, unfortunately, any intellectual of dissent. The Cultural Revolution became an inevitable, formidable tragedy that culminated the Maoist class struggle and “released all civil power accumulated in the previous three decades” of massive social mobilization

(BW 2014). Since 1978, the government, advocating for technology and education, opened a new chapter of massive mobilization for economy's sake. The individual, having been taken out of the control of and worship to the ancestor-oriented custom by the new state, found himself or herself in the coexistence of a liberal private life and a highly restricted public life. This resulted in the creation of "uncivil individuals" (Yan 2003) whose pursuit of maximized personal interests and inadequate thinking of responsibility soon became influential to the kind of "talents" that the universities produce. The capitalized society dissolves the possibility of massive mobilization, except perhaps some annual memorials in colleges and universities that eulogize the leadership of the winner in history. The present contestation in higher education is not led by a group of elite intellectuals of expertise. The current landscape of higher education is more flat than before, despite that many concrete luxuries and buildings are more frequently seen on campus. What characterizes today's higher education in China is a market-driven bureaucratic spirit that comes from the post-mobilization peasant culture and that is decorated with an ethnocentric, superficially anti-Western political discourse.

9.3 Principles of Higher Education: Change Over Time

As aforementioned, the study of the actors in and out of higher education will draw a boundary between the Chinese model and other models. According to the principal attribute of the leaders or leading factors of higher education, I divide the time from 1911 onward into three periods. This method roughly coincides with Hayhoe's, but is grounded on the mechanism of massive social mobilization threading the game of resource and power. The first was guided by philosophical diversity of education, in which returning and indigenous intellectuals debated over the viability of Western mode of university development and over how higher education should walk the nation out of the complex of detrimental crises. The second was dominated by Maoist ideology, during which time higher education gave way to socialist construction and revolution. The third was propelled by economy, in which higher education has been de-regularized with transnational cooperation for greater capitalistic profits and more tightly intervened by communist bureaucracy. There will be no big figures to discuss in the last period due to the massification of higher education and the propertied, individualized society moved predominantly by economy. Thus I turn to seek for the leading factor – the post-mobilization culture harmonized with globalization and capitalism.

9.4 Philosophical Diversity of Education

The interim between authoritarian regimes was both chaotic and thought provoking as many began to look for an answer outside of their own home. New colleges and universities originally established by missionaries and fund from treaties were soon

overtaken and administered by returning Chinese scholars and students (Hayhoe 1996). Even though they studied and brought back knowledge from different disciplines including both social and natural sciences, they shared the mission of "saving" and "reforming" the country and seeking for its future from the many examples abroad (Chen 1984, p. 97). The mission determined that intellectuals around and post-May Fourth Movement, up till the late 1930s, be characterized by the times of transition from an ancient agricultural economy to modernized industrial society (Tong 1991). More specifically, according to Tekong Tong (1991), they had the following three major features: (1) small in number, thus of high value of the time; (2) rich with general knowledge that crossed disciplines and the East–west division; and (3) poor in specialization since their knowledge scope was too broad and overarching (p. 13). But their contribution was to enlighten the oppressed and poorly educated Chinese people.

Pro-Western and anti-Confucian attitudes and publications encouraging new thoughts circulated among scholars in Peking and Shanghai, e.g., Ch'en Tu-hsiu from Japan in 1915 and Hu Shih from the USA in 1917, but were usually censored by the Republican government (Chow 1960). It was not until 1916 Cai Yuanpei returned from Germany and France, became the Chancellor of Peking University (1916–1927), and fundamentally reformed the institute from conservatism's control, were intellectuals and their works more effectively protected from political censorship (*ibid*). Scholars clustered in Peking University to exert impact on youths while endeavored to keep the campus away from political contamination. Similarly, under the lead of Mei Yiqi (1931–1948), Tsinghua University also emerged to be a register of scholarly contributions. Not to deny the development of natural sciences, the progress in and influence from humanities (e.g., philosophy, literature, and education) thrived more prominently, as most intellectuals rose to confront the meta-questions for the transiting China: the philosophy of science and democracy, the tradition and nature of Chinese people, Eastern and Western civilizations, etc. (Tong 1991).

The returning intellectuals from overseas universities were the first ones who took full advantage of public media in cultural and educational sectors to spread knowledge and call for nationwide unity (*ibid*, p. 13). The overview of China's intellectual activities between the 1910s and 1930s was one around the most eminent universities that tolerated different, even conflicting thoughts. Universities provided the space and security that prospective thought leaders needed to consolidate their theories, attract supporters, and conglomerate power. Scholarly activeness and academic freedom in Peking and Tsinghua Universities made them, in decades' time, the most attractive places of political supervision.

9.5 Ideological Totalitarianism Over Education

It is true that higher education underwent a severe winter when ideological totalitarianism crushed on it. But anti-intellectualism was far more complicated than an educational crisis as the Chinese nation was in unfathomable abyss of crises in economy and international relations. The enlightenment work led by intellectuals, returning or domestic, should come to a pause or at least give way to the unification of labor force invested in productivity. This sector synthesizes Barbarian Warrior's (2014) *The Last Money Printing* and Tekong Tong's (1991) *The Confusion of China* to explain the motivation/goal and strategy of the CCP leaders' attack on intellectuals and the liberal arts part of higher education. From the perspectives of macroeconomics and ideological studies, massive social mobilization comes to the surface as a consistent mechanism that threads the pre- and post-1949 movements and carve out higher education's characteristics. The following explanation also sets the foundation of understanding recent phenomena in Chinese higher education that I will discuss in the next section.

As discussed above, Mao Tse-tung was more successful than Chiang Kai-shek in the revolution because the CCP was grounded on Marx's class struggle theory that stimulated and unified the majority's nerve and used their inflamed passion to feed "state socialism" with the strongest manufacturing productivity Chinese people could ever make. This is one of the best examples of economic basis serving superstructure, dividing society according to economic subculture, or what Marxists call "class consciousness," while demanding other forms of subculture to be no more than appendage to "class consciousness" (Tong 1991, p. 26). Communist leaders used the two tactics to set up a solid ideological and economic foundation to defeat the other and only domestic enemy and defend the Chinese currency, RMB, against the USA-headed Western force during the Cold War world pattern (BW 2014). The marching toward a promising future attracted many intellectuals, returning and domestic, who at the same time of making contributions, also caused challenges to the socialist framework and distraction from manufacturing construction that were least favored by the New China regime (*ibid*).

But why and how did intellectuals and their gathering place – higher education – eventually become so parallel with and dependent on the communist authority that is against the traditional Confucian schooling and that is supposed to represent the most advanced productivity and Chinese culture? The reason lies in the intrinsic contradiction between the bourgeois nature of knowledge and the proletarian foundation of the CCP (Tong 1991). Knowledge enables people to think of social problems, such as equity, liberty, and prosperity. All of them are middle-class world view, a.k.a. bourgeois cultural capital, in which the upgrade of culture is subject to that of economy, shaking the mental basis of the non-propertied class on which Mao and his Communist Party heavily relied. Contradictorily, the other part that the CCP relied on, industrial development, could not be achieved without knowledge. In other words, mainland politicians had to massively generalize education and waste it simultaneously, and more seriously, to assault and create bourgeois at the same

time (*ibid*, p. 7). Additionally, according to Tong, Mao's discriminatory thought against intellectuals was shaped during the May Fourth Movement, a substantive transitional period. Wartime chaos and the ending of the Qing Dynasty determined, or confined, their major mission to be enlightenment rather than the building of economic basis. The priority of this mission certainly did not apply to both China's post-war situation and the CCP's totalitarianism over the country, which was supposed to be a fundamental development period. Mao's strategy then was to kick out theories of Dewey and other capitalist educationists and emphasize on the elimination of illiteracy among the proletarian peasants and on following the Soviet model of highly specialized vocational training in post-secondary schools.

Despite that the industrialization process was on a fast track, it could barely abandon China's embedded agricultural economic basis and keep up with the rapid growth of the size of intellectual population – or the enlarged existing and potential bourgeois population (BW 2014; Tong 1991). Such conflict in the end culminated in the burst of the Cultural Revolution from 1966 to 1976, resulting in the massive, unprecedented persecution of intellectuals, stagnancy in higher education, and a subservient position of both to political demands. The Cultural Revolution nevertheless stored in mainland China a huge group of literate citizens who would bounce up to propel technological and economic boost once the valve on the market was lifted. But the high collectivist pressure did not prevent the centralization of political power which could be used for economic competition later and buried the seed of individualization that would soon dominate the entire territory when the land became more profitable for individuals. This issue indicated increasing wealth gap and un-transparent competition over resources. In universities and colleges, the oppression of humanities and social sciences and valuation of natural sciences and vocational training extended till the present. The incoming neoliberal common sense and free market mechanism not only did not bring in academic freedom to the oppressed intellectual life in China, but reinforced the unbalance between the two sectors in higher education.

9.6 Economic Impetus Within Education

Three watershed events took place in three sequential years. In 1976, the Cultural Revolution ended soon after Mao's passing. In 1977, national college entrance exam resumed. In 1978, Deng Xiaoping liberated the Chinese economy from the previous planned strategy and imbued it with the invisible hand of the market. Undoubtedly the developmental history of Chinese higher education opened a new chapter by the end of the 1970s as higher education took a structural reform. Brainpower came to be recognized as one of the fundamental pillars of the market economy's boost and the overall upgrade of Chinese citizens' life. But we will more or less lose track of the causality to the twin phenomena of marketization and recentralization, if not keeping in mind the impact of massive mobilization. It is as important to remember the CCP's two cornerstones – its credibility among the mass and the latter's full

engagement in manufacturing. They have been experiencing considerable changes in this global age, pushing higher education to a yet mysterious future.

BW (2014) presented and analyzed the unfavorable financial environment that encompasses higher education in China. The Party continued to use massive mobilization as the main strategy for nation building, but this time was for the sake of economy and supposed to head to the dream of "common wealth." However, new economic miracles at home constantly challenge the Party leaders' morality and commitment to communism. The communist goal, unfortunately, is becoming increasingly utopian as more and more sectors are privatized to save the credibility of RMB while monopoly is making things worse. Nor is the mass the original non-propertied class, after years of education. The intelligentsia, i.e., the entire educated population, increasingly recognizes, favors, and follows the Western educational condition and philosophy they once despised. And they are no longer a small population share. Such contrast is accompanied by the unequal distribution of resources which exacerbates the cost of living, and lowered ethic and morality due to high taxes, inequalities, and unemployment. Furthermore, foreign countries are retreating their investment and transnational corporations from China's territory to strengthen home manufacturing and survive financial crises, remarkably weakening China's productivity and RMB's stability. Upon losing both cornerstones, the CCP reinforced its political economy tactic since 1978: political leftism plus economic rightism (PLER) (Zhang 2013).

The twin phenomena of marketization and recentralization in higher education is one of the most outstanding footnotes of PLER. On the one hand, the government puts higher education into global competition, i.e., world university rankings, to train and attract top specialists in natural sciences to feed technological and economic needs. But this process inevitably produces huge profits for bureaucrats who have some position in universities. On the other hand, the government tightens academic freedom and institutional autonomy to enforce its credibility among the highly educated, i.e., the seven prohibitions[9] and the currently blocked "Western values," resembling Mao's requirement on speech control. Two recent discourses are worth discussing at this point. One is talent cultivation (*rencai peiyang*). The other is China Studies (*zhongguo xue*). Both phrases do not have an equivalent terminology in neoliberal educational systems because of China's state-wide institution (*juguo tizhi*) and politically controlled cultural development.

Investigation would remain at surface value if the analyst does not reflect on the hierarchical connotation behind "talent cultivation" (a.k.a. "personnel training," "talent training"). Interestingly, most, if not all, domestic studies on "talent cultivating" and on comparative research between China and the USA or other Western/Westernized educational models fail to acknowledge the overloaded Chinese characteristics within this term, let alone challenging its embedded bureaucratic intervention. It is indeed a transformed upgrade passage in the bureaucratized and

[9]The seven prohibitions in university classrooms include universal values, journalism freedom, citizenship, citizen's rights, CCP's historical mistakes, capitalist class of privilege, and judicial independence (ChinaPress 2013).

materialized Confucian tradition to supply social engineering and national productivity with competitive vocational experts. Barely reflexive, the cultivation thought is a limiting frame that continues the intrinsic conflict between producing knowledge and selectively cutting off a part of it. The top-down call of "talent cultivation" hardly modifies the prioritization of seniority and bureaucracy, hardly motivates students at university level to become scholars and researchers of integrity and innovation, and hardly can it absorb enough quality intellectual force from lower level schools at the absence of liberal education.

Another embodiment of PLER in the globalized higher education domain is China Studies. China Studies, different from sinology and Chinese studies, is alleged to "comply with national strategic needs" and "internationalization" (Qian 2014), a resistance against the West-dominated discourse of China. It is a leadership-directed, elitist discipline that embraces and crosses philosophy and religion, history and archeology, language-literature-culture, economics and management, law and regime, and public policy and is hosted by the English language to ensure a wide coverage of audience and students (Gao 2014; Gan and Liu 2014). But professionally, a politics-first study is barely a good one. It is instead an ethnocentric propoganda to raise government's credibility among the public and make profits by internalizing neoliberal discourses of elitism. Educationally, the ethic of scholarship is in regression (Qian 2014; Gan and Liu 2014).

9.7 Conclusion

Is it that education pilots society or that society dogmatizes education? Along the trajectory of modern Chinese higher education, the first phenomenon did exist in the first 20 some years after the 1911 Revolution, as evidence suggests that education was mobilized by intellectuals who advocated for "educate for education's sake." Again, "education's sake" does not mean that education is apolitical and forgetful of the nation's future. Rather, it deposits a brighter future in the integrity of educational and scholarly work, which could only be realized in academic autonomy at the macro level and independent personality at the micro level informed by such autonomy. But both autonomy and independence hindered the centrality of resource, which is the trend of nation building since the early 1900s. The trend is embodied by various strategic uses of the contradictory relations between power, knowledge, and patriotism.

From the late 1930s till the present, the Communist Party had been successful in terms of both the unification of educational theories and the mobilization of brawn and brain. The practice of state socialism enabled the minority group of socialist mobilizers to impose political pressure over the majority group of the mobilized. The minority constituted and monopolized political environment prepared the foundation of "political leftism and economic rightism." The massive mobilization work provided the resourceful hands the competency to grasp the first and best opportunities to annex economic domination with political power, as soon as the country was

open to liberal market and knowledge-based global competition. In the meantime, the majority's eagerness in higher education was evolved from the bureaucratized Confucian rationale of the positive correlation between schooling and socioeconomic status.

At present, China is facing double problems in economy and culture, another critical time of seeking for a more promising future. The current government's propaganda of "the Chinese dream" in fact implies the hardship of achieving any reform goals, but without achievement the country will soon fall in real, pervasive crises. Even though higher education is far from a perfect and protective place for academic integrity, far from educating for education's own sake, it bears some possibility of re-enlightening and empowering a small number of Chinese youths who have the potential of balancing power, knowledge, and rational patriotism, who are receptive, critical, and reasonably optimistic. They are very precious to the present society as the May Fourth youths were to the 1920s society, thinking of not only expertise in their specific field, but larger public responsibility. The country is waiting for the revival of a mobilized passion to combat social, political, economic, cultural, environmental, and educational problems. The inspirational work is more likely lying in higher education than any other sectors.

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Chapter 10
Differences Between Native and Non-native Chinese Speaking Teachers: Voices from Overseas Students Who Study Chinese in China

Ko-Yin Sung and Frederick Poole

Abstract The majority of Chinese language teachers in China and overseas are Chinese native speakers. These native speaking teachers' educational and cultural backgrounds are different than non-native Chinese speaking teachers. Studies have shown that teachers' educational and cultural experiences influence their pedagogical decisions such as teaching beliefs, styles, and approaches. This chapter attempted to identify the teaching models Chinese native teachers use and document the Chinese models in practice by comparing the differences between native and non-native Chinese teachers from the students' perceptions. A survey with 44 survey items and two open-ended questions regarding students' perceptions of native and non-native Chinese teachers was used. The survey items with which the majority of the participants agreed or disagreed were presented and discussed. The answers of the open-ended questions were categorized into different themes and were used to further elaborate the participants' opinions. The results showed that, from the perspectives of the participants, Chinese language teaching has some unique aspects, which can be attributed to traditional Chinese teaching concepts, such as the lecture teaching style and the belief of teachers as authority figures.

10.1 Introduction

Mandarin Chinese, the most widely spoken language with 1.1 billion native speakers in the world, is considered one of the most influential languages. With the open door policy and the economic rise in China in recent years, globalization and economic opportunities have become the main reasons people choose to study Chinese as a foreign language. Taking the United States as an example, there were only approximately 3000 U.S. college students studying abroad in China in 2000.

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In 2012, the number of students studying in China quintupled to approximately 15,000 (Open Door 2014). According to a survey conducted by Modern Language Association of America, Chinese is the seventh most studied language in U.S. higher education with 60,976 students learning Chinese in 2009, which was an increase of 44 % since 2002 (Furman et al. 2010).

The demand for Chinese language teaching and learning around the globe has been rising rapidly. According to a news article in Dahe (2014), a national Chinese newspaper, an estimated 100 million people are studying Chinese and 5 million Chinese as a foreign language teachers are needed worldwide. In order to meet the needs of the increasing demand of Chinese language learning and teaching, the Chinese national office for teaching Chinese as a foreign Language, Hanban, established non-profit public institutions called Confucius Institutes in 2004, which aim to promote Chinese language and culture in foreign countries. Hanban sends hundreds of native Chinese speaking teachers overseas each year to teach Chinese language and culture. By the end of 2010, 322 Confucius Institutes and 369 Confucius Classrooms were set up in 96 countries, which offered 9,000 Chinese courses with a total enrollment of 260,000 students (Confucius Institutes 2009). By 2014, the number of Confucius Institutes increased to 443 in 120 countries (Wu et al. 2014).

The majority of Chinese language teachers in China and overseas are Chinese native speakers. For example, in Australia native Chinese speaking teachers (NCSTs) consisted of 90 % of the Chinese language teaching population (Orton 2008). These native speaking teachers' educational and cultural backgrounds are different than non-native speaking teachers. Studies (Roberts 1998; Zhan 2008) have shown that teachers' educational and cultural experiences influence their pedagogical decisions such as teaching beliefs, styles, and approaches. This chapter attempted to identify the teaching models NCSTs use and document the Chinese models in practice by comparing the differences between NCSTs and non- NCSTs from the eyes of their students. The design of this study intended to contribute to knowledge in that it compares two models, a NCST Chinese language education model and a non-NCST Chinese language education model, that share many similarities (discipline, geographic location, etc.) and one key difference (teacher background).

10.1.1 Theoretical Framework

In this study, students' perceptions regarding their teachers are considered their attitudes towards them, which is defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly and Chaiken 1993, p. 1). According to Krosnick et al.'s (2005) processing framework for attitude reports, students go through three phases when answering questions about NCSTs and non-NCSTs. First, students may automatically activate evaluation when they read the questions about their teachers. This initial evaluation takes less than a second and does not require an active search from memory. Next, the students

move to the deliberation phase, in which the students search for relevant information regarding their teachers from their memory. This phase involves effortful process. Finally, the students come to the response phase, which concludes the evaluations generated from the previous two phases. This study used the students' evaluation results through the three processing phases regarding their teachers as data.

10.2 Chinese Language Education in Practice

10.2.1 Literature Review

Chang (1983) summarized the characteristics of traditional language teaching in the early era in China. One feature of traditional language teaching is the emphasis on learning Chinese characters. The second feature is reading many writings on various topics. Chinese teachers believe that writing skills can only be developed by gaining knowledge of characters and reading. The third feature is having constant practice, particularly the practice of reading and writing. Chinese is an ancient language, whose original written language, called wényánwén (classical Chinese), was established during the Qin and Han dynasties. However, as the language evolved over time, the language used in classical Chinese became significantly different from the language used in modern times. Chinese people no longer use classical Chinese in their daily life; therefore they believe that in order to acquire knowledge from readings in classical Chinese, memorizing them is an effective way to learn (Chang 1983). Hence, the task of memorizing texts has become common practice in learning languages today. The last feature is the pre-requisite of independent thinking. This concept of independent thinking is derived from one of the sayings of Confucius, the most influential and respectable educator in China, about learning. Confucius said, "Learning without thought is labor lost; thought without learning is perilous" (Legge 2004, p. 8). These early beliefs on language learning and learning in general can be viewed as the building blocks to the modern Chinese education model. Chang criticized the traditional way of teaching the Chinese language for ignoring oral skills. He argued that only learning to read and write is not sufficient to meet the needs of modern Chinese language learners. In addition, Chang noted that the indigenous Chinese language education model was less systematized than those of other countries.

The more recent literature on modern Chinese language education agreed with Chang's summary of traditional teaching. In a study, Haley and Ferro (2011) interviewed ten Chinese pre- and in-service teachers about language teaching in China. The results showed that a teacher-centered approach was heavily favored. Several participants mentioned the common expectation for students, either native speakers or international students, to take notes, memorize information, and prepare for exams. Moreover, these teachers placed a major emphasis of learning on grammar

and writing. Orton's (2008) study of NCSTs in Australia also reported that the teachers valued character learning, rote-memory skills, and drills, over oral skills. Scrimgeour's (2011) study results complied with Haley and Ferros' and Orton's, in which the NCSTs reported that they encouraged students who studied in China to use rote memorization and drills. In addition, the NCSTs in Scrimgeour's study believed that students should not challenge the teacher's authority. Haley and Ferro (2011) pointed out that the NCSTs' teaching perceptions were related to their own learning experiences in China. Moloney (2013) explained that teachers with Chinese educational backgrounds were deeply influenced by the traditional teaching concepts grounded in Confucian principles. Traditional beliefs, such as that students should value and respect teacher knowledge and authority, be hard working and serious in their studies, and do well on written examinations, were deeply embedded in the NCSTs' teaching practices, which could be seen as the Chinese model of education.

The aforementioned studies indicate that language teaching using Chinese education models seems to closely follow the traditional language teaching approaches, which emphasize literacy skills and overlook oral competencies. However, these studies observed the Chinese teaching models only from the NCSTs' point of view. None of the studies included the views of students learning Chinese as a second language. This chapter intended to fill this gap in the literature and focused on identifying the Chinese language teaching models from the perspectives of the students. To be specific, this study asked international students who studied Chinese in China to compare the differences between NCSTs and non-NCSTs. By comparing the differences between the two teacher groups, Chinese education models that NCSTs practice were revealed from the view of the students.

10.3 Methodology

10.3.1 Participants

A total of 41 participants with ages ranging from 14 to 35 were involved in this study. Eighteen participants were enrolled in an intensive Chinese program in a national university in Shanxi Province in northern China. Ten participants were studying in the Chinese program operated by the Confucius Institute in a university under the authority of the provincial government in Shanxi. Nine participants were in a private Chinese school in Beijing. Four participants were in a Chinese language summer study abroad program in a national university in Xi'an. There were 8 female and 33 male participants. The participants were studying Chinese for different reasons including receiving a language scholarship from the Chinese government, hoping to get a degree, getting credits for a study abroad program, and hoping to get around China easier. Three teenage participants who were under 18 were in China due to their parents' work. Amongst the 36 participants who reported a

Table 10.1 Participants' majors

Majors	# of participants	Majors	# of participants	Majors	# of participants
Business	9	Journalism	1	Political Science	1
Chinese	8	Psychology	1	Media Arts	1
Engineering	4	Teaching	1	Criminal Justice	1
International Studies	4	Web Design	1	English	1
Asian Studies	2	Linguistics	1	Accounting	1

Table 10.2 Participants' first languages

First languages	# of participants
English	25
Spanish	4
German	2
Armenian	2
Italian	2
French	2
Persian	2
Uzbek	1
Pashto	1

university major, nine of them majored in Business, eight of them majored in Chinese, and the rest majored in a diverse range of areas (See Table 10.1).

With regard to the participants' first languages, a majority of the participants spoke English (25); however, there was also a sizeable diversity amongst the participants first languages (See Table 10.2).

All except two participants had learned at least one foreign language prior to learning Chinese. All of the participants had reported being taught Chinese by at least one and no more than 20 NCSTs ($M = 5.9$, $SD = 3.5$), while 27 of the participants had reported being taught Chinese by at least one and no more than five non-NCSTs ($M = 1.1$, $SD = 1.2$).

10.3.2 Survey Design

The survey used in this study consisted of three parts. The first part asked for the participants' background information including age, gender, major, first language, foreign language learning experiences, and experiences learning from NCSTs and non-NCSTs. The second part of the survey consisted of 44 survey items and two open-ended questions asking the participants' perceptions toward NCSTs and

non-NCSTs. The perceptions were measured by asking students to compare and contrast the teaching styles of NCSTs and non-NCSTs. The statements included in the 44 survey items were adapted from Medgyes's (1999) survey results regarding the different traits between native English speaking teachers and non-native English speaking teachers. Some of the statements had minor modifications to fit the current study context. Each statement had five choices: strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. According to Medgyes (1999), "individual teaching style is largely determined by whether a teacher happens to be a native or a non-native speaker" (p. 55). As Medgyes' (1999) study results supported his statement, adapting the results found in Medgye's (1999) study as survey questions was relevant for this study as it would help this study identify traits about NCSTs and non-NCSTs. The two open-ended questions following the 44 survey items intended to elicit elaborated explanations and insights from the participants regarding their perceptions of teaching practices by NCSTs and non-NCSTs. The two questions were: (1) What do you think the pros and cons are to being taught by a native Chinese speaking teacher?, and (2) What do you think the pros and cons are to being taught by a non-native Chinese speaking teacher?

10.3.3 Data Collection and Analysis

The participants' answers for the 44 survey items were tallied and simplified into three categories: (1) strongly agree or agree, (2) neither agree nor disagree, and (3) disagree or strongly disagree. The items with which the majority (more than half) of the participants agreed or disagreed are presented and discussed in the Results section. Items that did not reach a majority consensus were not discussed because they were viewed as individual preferences rather than preferences that could be generalized to Chinese students as whole. For the open-ended questions, first, the researchers typed out all of the participants' answers and read them separately. Each of the researchers identified patterns which emerged from the answers and categorized them into different themes. Next, the two researchers sent their work to each other for review. For the categorizations with which the researchers did not agree, they discussed these items further and came to a conclusion as a team. The inter-rater reliability in this study before discussion was 95 %. Due to the huge number of categories identified in the study regarding the pros and cons to being taught by NCSTs and non-NCSTs, the researchers only presented and discussed the categories which a quarter or more of the participants mentioned. Again categories in which less than a quarter of the participants mentioned were not discussed as these areas were seen more as individual preferences.

10.3.4 Limitations Related to the Data Used

The current study has several limitations. This study only involved 41 participants, which is a limited number to represent students learning Chinese as a second language. Moreover, due to the limited number of participants, this study was only able to use simple statistics of tallying to present the quantitative results, and was not able to run more robust statistical tests, which yield higher reliability in findings. In addition, the data collection method was a survey, which only captured the participants' perceptions at one point in time. In the future, studies with a larger number of participants located in different geographical areas are needed to increase the reliability and validity of study results. Furthermore, different data collection methods such as classroom observations and interviews with a more extensive period of study time are needed to detect any changes in student perception over time and the reasons of change.

10.4 Results and Discussion

10.4.1 Quantitative Findings

The results of the tally on the survey items showed that the majority of the participants agreed with 11 and disagreed with 1 of the 44 items. The 12 items with which the majority agreed or disagreed are listed in Table 10.3.

Table 10.3 demonstrates several differences between NCSTs and non-NCSTs. From the participants' view, NCSTs have better Chinese language proficiency with respect to using real language; therefore, they use Chinese more confidently and can teach items in context. NCSTs are also perceived as having language knowledge in different areas such as meaning, language in use, oral skills, and colloquial registers and hence were able to focus on the teaching of fluency rather than accuracy. In addition, the participants also believed that NCSTs are able to provide more cultural information. These findings are not surprising and they comply with Medgyes' (1999) study on English native and non-native teachers. Native teachers represent their native language and culture, and automatically earn more legitimacy to teach that language and culture. On the other hand, the participants thought that non-NCSTs are more cautious when teaching. Moreover, participants believed that non-NCSTs focus more on correcting errors. Medgyes (1999) explained that the differences regarding error-correction between native and non-native teachers could be due to native speakers seeing language as a communicative tool, hence, do not correct errors unless they hinder communication. In contrast, non-NCSTs see the target language as a subject to learn, therefore, they are more cautious and try to prevent students' errors. In terms of using English or students' first language to assist in teaching Chinese, the participants felt that NCSTs use them less than non-NCSTs. As a result, the participants believed that non-NCSTs did more translation

Table 10.3 Survey items with which the majority of the participants agreed or disagreed

Survey item #	# of participants strongly agree or agree	# of participants neither agree nor disagree	# of participants disagree or strongly disagree
1. Native Chinese teachers speak better Chinese	40	1	0
5. Native Chinese teachers use Chinese more confidently.	35	3	3
3. Native Chinese teachers use real language.	28	10	3
25. Native Chinese teachers teach items in context.	26	9	6
37. Native Chinese teachers use no or less English or students' first language.	26	10	5
38. Non-native Chinese teachers use more English or students' first language.	26	8	7
10. Non-native Chinese teachers are more cautious.	25	15	1
43. Native Chinese teachers supply more cultural information.	25	7	9
23. Native Chinese teachers focus on fluency, meaning, language in use, oral skills, colloquial registers.	24	6	11
34. Non-native Chinese teachers correct errors.	24	12	5
40. Non-native Chinese teachers resort to more translation.	24	10	7
27. Native Chinese teacher prefer free activities.	7	12	22

in teaching. The use of the students' native language could be seen as a favorable teaching feature. Medgyes (1999) stated that non-native teachers who "have jumped off the same springboard as their students, both in a linguistic and cultural sense" (p. 58), are fundamentally more understandable to their difficulties than native teachers. The survey items with which the majority of the participants disagreed is that NCSTs "prefer free activities". This finding is contradictory to Medgyes's (1999) study. Medgyes's study showed that English native teachers were confident about teaching their native language and were not afraid to use free activities, such as group work and pair work, which were less predictable in terms of language used in the activities. On the other hand, non-native teachers were perceived to have limited knowledge of the target language; therefore, they preferred more "controlled and cautious" (p. 57) teaching methods, such as using the standard course books. The distinctive finding in this study could be explained by the influence of the traditional Chinese education model. The studies (Chang 1983; Haley and Ferro 2011;

Orton 2008) in the Literature section mentioned that language teaching in China is teacher-centered and focused mostly on literacy skills. This could explain why NCSTs are perceived as not favoring free activities, which are learner-centered and frequently emphasize oral skills, even though they were confident and capable of carrying out free activities which demand more language knowledge.

10.4.2 Qualitative Findings

For the qualitative findings, the teaching features of NCSTs and non-NCSTs were investigated through a comparison of the pros and cons of being taught by the two distinct teacher groups. The participants were asked two open-ended questions. The first question relates to their perceptions about the pros and cons of being taught by NCSTs and the second question regards the pros and cons of being taught by non-NCSTs.

10.4.2.1 The Pros of Being Taught by NCSTs

1. Pronunciation: The majority of the participants pointed out that the advantage of having NCSTs was receiving high quality pronunciation instruction. The participants used the following words, “good”, “clear”, “better”, “correct”, and “standard” to describe native speaking teachers’ pronunciation. The participants also mentioned that native speaking teachers paid “more attention to the pronunciation”, had “a native accent”, and had “a better ear for tones”; therefore students could “learn proper pronunciation.”
2. Culture: NCSTs were seen as Chinese cultural experts by the participants. Almost half of the participants believed that NCSTs had more “cultural insight” and “cultural understanding,” and were more “experienced with Chinese people.” Several participants were specific about the kinds of cultural knowledge NCSTs possessed. They expressed that NCSTs had knowledge of “cultural norms in China,” “history of characters,” “Chinese slang and jargon,” and “the speaking style of Chinese people as well as their habits.” The superior cultural knowledge enhanced their teaching. One participant explained that while studying China the NCSTs were able to clearly explain cultural incidents that occurred in the participant’s daily life. Other aspects of NCSTs as Chinese cultural experts identified by the participants included telling their students “childhood stories of China,” offering “unique perspectives on American and Chinese students,” and teaching “chengyu,” a type of traditional Chinese idiomatic expressions. One participant concluded that “learning the language by a native teacher not only gives the students a good grasp of the language, but more importantly a better understanding of the different ways of thinking and problem solving methods of the Chinese.”

3. Spoken Chinese: Approximately a third of the participants believed that NCSTs were more capable of teaching them spoken Chinese. To be specific, the participants mentioned the teaching of "how people speak in everyday life," "appropriate ways to use colloquialisms in a given context," and "new phrases of Chinese language." One participant stated that NCSTs offered the opportunity for students to:

   > hear the living language (not only learning new words, but also hearing the slang meaning or connotations) and hearing the language more in practical, everyday context (as opposed to some of the same uses that came from a textbook as taught by a non-native Chinese speaking teacher.)

4. Chinese Only: Approximately a quarter of the participants mentioned the notion that little to no English use by NCSTs is a benefit in their learning. One participant explained that "it forces the student to learn Chinese, rather than rely on English to communicate. This is the primary advantage for improving listening comprehension and learning the way they learned."

10.4.2.2 The Cons of Being Taught by NCSTs

1. Teaching Methodology: A quarter of the participants disfavored NCSTs' teaching approach and described the approach as primarily lecture based, boring, conservative, and not communicative. Some of the participants called this teaching approach the "Chinese method" and believed that the teachers wanted them to learn Chinese "the way they were taught it or the way they were taught English." A few participants explained the kind of "Chinese method" they received. The Chinese approach was "likely to be more focused on rote memorization rather than application," "less likely to utilize modern methods of instruction," "lacks creative work and variety of activities," and "sticks to the textbook." The other aspect the participants disliked about NCSTs' teaching was the lack of understanding of the language difficulties Chinese as a second language learners have. Due to that lack of understanding, the participants observed that NCSTs "are often not aware of key areas of difficulty;" therefore, "unable to explain concepts accurately to a learner" and "unable to explain grammar points or rules to the language." In the survey findings, the participants reported that NCSTs were knowledgeable about Chinese, but in the qualitative findings, the participants believed that NCSTs could not explain grammar clearly. These findings imply that even though NCSTs have superior knowledge in Chinese, it does not necessarily mean that they know how to teach the language well. This could be due to NCSTs not being able to use the participants' first languages or the international language, English, to explain grammar concepts, or due to NCSTs use of Chinese as their first language, which makes it difficult to understand the learning difficulties of the learners.
2. Teaching Style: Approximately half of the participants mentioned the aspects they disfavored of NCSTs' teaching style. A few mentioned that NCSTs were

"usually more strict [*sic*]" and had "unrealistic expectations." Some observed that NCSTs "often refuse to admit mistakes" and explained that the reason for this characteristic could be attributed to the Chinese cultural concept of "face," which represents one's reputation and prestige. Under the influence of Confucian principles, teachers in China are seen as having high authority and are a highly respectable group within society. Hence, the traditional value expects respect from students to teachers and expects students to obey teachers without question. If students do not follow this expectation, it is likely that teachers feel disrespected by the students. With respect to teacher-student interaction, several participants described the interaction they observed as having a "lack of direct contact with students," "more robotic, less emotion," and "no one-on-one attention." These observations could all be attributed to the NCSTs' traditional belief in the social status differences between teachers and students, in which teachers are masters and students are apprentices.

3. Cultural Barrier: A quarter of the participants felt that NCSTs had a lack of understanding of western culture and foreign learners studying Chinese as a second language. The participants stated that the teachers did not appreciate the difficulty of Chinese for second language learners, did not understand common problems that learners have with Chinese, did not understand western students' learning styles and did not understand cultural norms of students from the western countries.

10.4.2.3 The Pros of Being Taught by Non-NCSTs

1. Empathy for Students: Approximately half of the participants stated that non-NCSTs were better able to relate to students' learning. Comments regarding non-NCSTs' empathy for students included "know how tough it is to learn Chinese," "know what the common troubles are," "are more sensitive to the hurdles faced by non-native speakers," "are able to empathize with learners," "have better understanding of the language learning process and are aware of certain obstacles to building fluency," and "understand the difficulties in learning Chinese as a second language." In the participants' opinion, since non-NCSTs had personal learning experience as a Chinese language student, they "have knowledge of teaching a non-native speaker." For example, the participants' stated that the non-NCSTs "can give more suggestions about how to learn Chinese," "understand and explain when students ask questions about cultural differences," and "know how to explain things so students understand it, especially grammar."
2. Various Teaching Approaches: More than a quarter of the participants mentioned non- NCSTs' teaching approaches as a positive feature in their teaching. Some of the participants identified the teaching approaches as close to the communicative approach. For example, the participants mentioned that non-NCSTs "do more dialogue activities and group work," "understand various methods of teaching such as student centered learning," "are more likely to have a more

communicative teaching style," and "would most likely have a more pragmatic approach in teaching." Some participants mentioned the flexibility and dynamic nature of the teaching approaches. For example, the participants said that non-NCSTs were "likely to have greater flexibility with teaching style," "use variety of teaching devices and materials," and "accommodate what I want to learn not what they think [they] should be learning," and "teach relevant information." These findings contradict with the quantitative finding that "Non-native Chinese teachers resort to more translation". One explanation could be that, compared to NCSTs, non-NCSTs did use more translation; however, besides the translation method, non-NCSTs also adopted other methods as they were more flexible with teaching style according to the participants.

3. First language support: A quarter of the participants commented on the usefulness of first language support provided by non-NCSTs. Comments such as "better knowledge of translation part," "can explain the meaning of a text in our first language," "able to translate when I'm confused," and "have the luxury of being fluent in both languages and can easily find the best translation for different contexts" described how non-NCSTs used the first language to assist in student learning. One participant expressed the appreciation of non-NCSTs' capability of using first language to support students' learning. The participant stated,

> I have the ability to ask and fully understand a word or sentence's meaning. If I asked a native Chinese speaker, sometimes he/she will not be able to fully explain the concept usually because of poor English (the student's first language) skills.

10.4.2.4 The Cons of Being Taught by Non-NCSTs

1. Pronunciation Problems: One third of the participants thought that non-NCSTs did not fully master the pronunciation of Chinese and were not as capable of teaching pronunciation as native teachers. A few comments described the non-NCSTs' speaking as "unable to speak proper Mandarin," "having poor and incorrect pronunciation" and "having an accent." The comments also described their pronunciation as "not perfect," "wrong," "not good," "incorrect," and "not the optimum." The negative comments regarding pronunciation could be due to the tonal feature of spoken Chinese. Chinese uses different pitches to distinguish lexical meanings. A pronunciation with different pitches represents different Chinese characters and meanings. This feature is deemed to be difficult to master, especially for people whose first language is not tonal. Several of the participants' comments mentioned problems with non-native teachers' tones. For example, "poor use of tones," "the tones can be off," "tones are not as good as a native speaker," and "they can be wrong on tones and not know it." One participant expressed his distrust of his non-native teacher's ability to pronounce tones correctly and his unwillingness to learn tones from the teacher. He said, "I've had Chinese exchange students tell me my non-native Chinese teacher's tones are poor which makes me not want to trust her tones and learn my own way by maybe chatting with friends or watching a drama or just guessing."

2. Lack of Chinese cultural knowledge: A quarter of the participants felt that non-NCSTs did not have sufficient Chinese cultural knowledge. Non-NCSTs were described as "having less cultural background," "may not have been to China," "don't know the country [China] as much," "may not know all the necessary Chinese references," "may be slight gaps in information, potentially fewer in-China growing up stories," "highly unlikely they'll have the same level of cultural understanding in regards to the language's use and history," and "don't know all of cultural clashes you might come into contact with (though they do tend to have stories of their own which they can use to warn you)."

10.5 Summary

The current study compared a NCST Chinese language education model and a non-NCST Chinese language education model, that had the teacher background as the key difference. The quantitative findings of this study illustrated that the participants perceived NCSTs as the Chinese language and culture experts, who focus on the teaching of fluency rather than accuracy. The qualitative findings further confirmed and elaborated NCSTs' teaching expertise in culture and language, especially in the areas of pronunciation and spoken Chinese. Both the quantitative and qualitative findings pointed out that the teaching methodology used by NCSTs is not interactive and places more emphasis on the Chinese traditional language teaching practices of drills and memorization. The teaching styles of NCSTs identified in the qualitative findings, such as the interactions between students and teachers being distant and the teacher expectation being high, are all possibly influenced by NCSTs' educational and cultural backgrounds, which are based on Confucian principles. Compared to NCSTs, non-NCSTs were perceived as having restricted knowledge of Chinese culture and the Chinese language, especially in the area of pronunciation and tones. However, non-NCSTs were seen as being more empathetic toward learners of the Chinese language as they were once language learners themselves. Furthermore, non-NCSTs were more capable of using first language support and a wide variety of teaching approaches in teaching Chinese.

Comparing the findings of this study with others in the Chinese language teaching literature, the results of this study seem to agree with the others (Chang 1983; Haley and Ferro 2011; Moloney 2013; Orton 2008; Scrimgeour 2011). However, when comparing the findings of this study with studies which investigated differences between native and non-native language teachers of languages other than Chinese, such as Medgyes's (1999), only partial findings of this study agreed with the others. For example, like native teachers of other languages, NCSTs have superior native language and cultural knowledge; however, unlike native teachers of other languages, NCSTs do not prefer group or pair work, which promotes unpredictable language use. This shows that the Chinese language education models have some unique aspects, which can be attributed to traditional Chinese teaching concepts, such as the lecture teaching style and the belief of teachers as the authorities.

This study supported the findings of other studies that NCSTs inherited the traditional Chinese language teaching practice, which focuses on memorization and drills and promotes teacher authority and a teacher-centered environment. This study also found that the student participants did not think they benefited from this type of teaching practice. Despite the fact that the student participants believed that NCSTs had superior knowledge in spoken Chinese, NCSTs did not use the advantage of this superiority in teaching listening and speaking using the communicative approach which emphasizes student-centered learning. This finding echoed Chang's (1983) criticism that Chinese language teaching practice overlooks oral skills, and that literacy skills alone are not sufficient to meet the needs of modern learners. This implies that Chinese education decision makers and educators need to adjust the Chinese teaching models to better fit the needs of these learners. This adjustment is especially needed as students learning Chinese are from all over the world, who have different cultural backgrounds and needs. Modified teaching models which preserve the value of traditional teaching and at the same time reflect the current international perspective will be needed.

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Chapter 11
Dangling Between the Traditional and the Reformist: Reality Shocks for Student Teachers Amid the Tide of Educational Reform in a Test-Oriented Culture

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Abstract Recent education reforms in the United States have been focusing on raising students' academic standards through high-stakes testing in order to enhance their international competitiveness. Such endeavors have raised concerns among educators about an emerging test-oriented culture in school. This paper provides an international perspective on the current debate by providing a good case in point, examining the reality shocks experienced by student teachers in an East Asian Confucian circle society where high-stakes testing has long been a tradition. Both quantitative and qualitative data were collected, including a questionnaire survey with 159 student teachers and in-depth interviews with 34 student teachers from various schools in Taiwan. Three main themes emerged from the interview data analysis, showing that these student teachers were caught between the traditional and reformist ways of education in terms of: purpose of education (training for academic competitiveness vs. education for whole person), way of instruction (teaching to the test vs. teaching relevant to life), and student-teacher relationship (authority figure vs. teacher as equal friend). The sociocultural roots of the traditional test-oriented culture and recent educational reforms in Taiwan were explored. Two implications were presented: (1) teacher educators should help these student-teachers to construct a coherent set of personal theories about teaching with an understanding of the gap between traditional cultural roots and reformist educational changes. (2) Policy makers in the US should closely observe and carefully examine how the East Asian Confucian societies have implemented educational reforms in these years, so they can understand the long-term impacts and thus, make wise decisions.

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11.1 Introduction

In the recent education reform in the United States, formalized under the framework of "No Child Left Behind" legislation, reformists have adopted the ideologies of accountability and global competitiveness to push for higher academic standards with high-stakes testing in order to raise quality and enhance international competitiveness (Au 2007; Smith 1991). Such endeavors have raised concerns within the educational community about the emergence of a test-oriented culture (Hargreaves 1997). Much of the discussion has focused on the washback effects of high-stakes testing: how such testing affects teachers' priorities on the purpose of education (what to teach), pedagogy (how to teach), and classroom interactions (how to relate to students). At this initial stage, the impact of such test-oriented culture is yet to be observed (Gunzenhauser 2003). However, to see how education might be affected by a test orientation, it might be informative to examine a society where high-stakes testing has long been a tradition. Taiwan, one of the countries under Confucian context in East Asia where the examination tradition of the Confucian/Chinese cultural heritage is well preserved, provides a good case in point in examining this issue from a fresh perspective.

A good way to look into an educational system is to look through the eyes of student teachers, who are less socialized in the entrenched school culture and tend to hold a more reformist perspective of education. Exposed to the school culture, student teachers often suffer reality shock. This article intends to present the reality shock experiences of a group of Taiwanese student teachers, who found themselves dangling between the tradition and reformism in the tide of education reforms aimed at altering the traditional test-oriented culture. This article is organized as follows: An overview of reality shocks for student teachers will first be presented in Sect. 11.1, followed by an outline of the research design in Sect. 11.2; and then a detailed account of the reality shocks experienced by these student teachers will be provided in Sect. 11.3, followed by an in-depth discussion on the cultural roots of these reality shocks and implication for educators facing the test-oriented culture.

11.2 Reality Shock for Student Teachers

Reality shock, which can also be described as "transition shock", can be defined as "the collapse of the student teachers' missionary ideals formed during teacher training by the harsh and rude reality of everyday classroom life" (Veenman 1984, p. 143). Undergoing reality shock is a traumatizing experience for student teachers. The disillusionment caused by the huge gap between theory and practice is sometimes so frustrating that in countries including the US and UK, a high proportion up to 40 % of beginning teachers choose to abandon their profession (Ingersoll 2002,

2003; Sturman et al. 2005). This exodus reflects the severity of reality shock and warrants efforts by researchers to uncover its causes and solutions in order to undermine the negative influence cast on beginning teachers (MacDonald 1999).

Veenman (1984) reviewed 83 studies conducted in seven countries--the US, the UK, Australia, Germany, the Netherlands, Switzerland, and Finland--and compiled a list of 24 most perceived problems of beginning teachers, including classroom discipline, motivating students, dealing with individual differences, relations with parents, insufficient materials, etc. Later, Ganser (1999) conducted surveys to reexamine the usefulness of Veenman's framework and found that a lack of spare time, the burden of clerical work, a heavy teaching load, problems with classroom discipline, and large class sizes are the top five perceived problems that novice teachers indicated as most unexpected and frustrating. Marso and Pigge (1992) conducted a survey of a group of new teachers and found seven similar areas in which reality shock are most likely to occur. Many other studies conducted in this area have identified similar or dissimilar sets of reality shocks experienced by student teachers in their initial years of teaching (Merrett and Wheldall 1993).

In this substantial body of literature, there appear to be two missing links. First, the complex interplay between student teachers and their intern schools is missing from the picture. Many of the studies have been surveys that listed types of reality shocks reported by the teachers. Veenman (1984) admitted that among the 83 studies he had reviewed, few of them had included interviews, and rarely can we find studies concerning the complex interplay between teachers and their school environments. Considering the fact that as the intern school is the first place where student teachers get acquainted with the "real world" of teaching, the complex interplay between student teachers and their intern schools should be in the forefront when exploring the roots of those causes of shock. Second, rarely do these studies provide a broader picture of the cultural roots of the conflicts in values and beliefs experienced by student teachers in the context of educational reforms, in which traditional and reformist ideals of teaching and learning contradict and compromise each other.

To bridge the gap in the literature, this paper intends to delve into such contextual and cultural roots of student teachers' reality shocks by examining a group of student teachers in Taiwan who were situated in the complex interactions with their intern schools amid the tide of educational reform aimed to promote a set of beliefs and values contrasting with those of the traditional approaches.

11.3 Research Design

In order to gain an understanding of such culturally embedded reality shocks and to demonstrate the complex interplay between new teachers and their school environments, the researcher conducted both surveys and interviews in order to gather quantitative and qualitative data.

11.3.1 Questionnaire Survey

A questionnaire survey was conducted, with a 79 % of the response rate, on a widespread sample of 159 student teachers at the onset of their internships in a total of 82 intern schools across the country. These student teachers were specialized in various fields of study (such as Chinese, foreign languages, sciences, and arts) and were assigned to different intern schools, including middle schools, high schools, and vocational schools for a half-year, full-time internship. During the internship, they had to learn the administrative, instructional and classroom management responsibilities of a teacher under the guidance of supervising teachers at the school. The questionnaire (on a 6-point Likert scale) was composed of four parts: (1) respondents' beliefs in the purpose of education, content for instruction, and methods of teaching, (2) the ideal relationship between teachers and students, (3) opinions on students' abilities and motivations for learning, and (4) their overall impression and satisfaction with their intern schools. In addition, the respondents were asked to describe in writing the instances of "reality shock" they had experienced during their first two months of their internships.

11.3.2 Individual Interviews

For an in-depth understanding of how reality shock was experienced by student teachers during their internships, separate interviews with a group of 34 student teachers from 26 various intern schools were conducted. With only a few exceptions, each participant was interviewed four times: before the internship began, after a month of internship, at the mid-point, and near the completion of the internship. On the first occasion, respondents were asked to relate their background information, motivation for choosing teaching as their profession, and their ideal image of a teacher. On the remaining occasions, the interviews covered four major areas: (1) their observations of school practices; (2) difficulties and challenges they faced as new teachers; (3) rewarding experiences they encountered; and (4) reality shocks they experienced during the period. A total of 130 audio-taped interviews were later transcribed for data analysis. The grounded theory approach (Strauss and Corbin 1990) was adopted to analyze the interview data, through which important themes naturally emerged regarding respondents' experiences and underlying beliefs.

11.4 Research Outcomes

After analyzing the questionnaire and interviews, three broad themes were identified as areas where the student teachers experienced most conspicuous conflicts, including: (1) the purpose of education, (2) way of instruction, and (3) teacher-student interaction.

11.4.1 Purpose: Education for Whole Person vs. Training for Academic Competitiveness

It was found that most of the student teachers upheld a strong belief in education for "the whole person," while their intern schools tended to practice an education primarily for "academic competitiveness." Two items in the survey questionnaires focused on their beliefs about the purpose of education. The results showed that cultivation of a whole person based on one's individuality was held in high regard. A great majority (93 %) of the student teachers strongly agreed with the statement that "the purpose of education is to make students a well-rounded person instead of focusing on their academic development," and 82 % of them highly supported the belief that "the goal of education is to help students develop diverse individual potential instead of earning good grades and credentials."

A similar attitude was manifest in the interviews. Among the interviewees, 88 % of them preferred an education for all-round development over training for cognitive skills to pursue high grades. However, On the other hand, 96 % of them said that a "high admission rate to high school or college" was still the primary concern for their schools.

Both Yi, an student teacher at a magnet senior school with long tradition of a good academic reputation and Zhan, a student in a newly-established middle school made similar observations. They felt their intern schools tend to ignore important abilities and virtues, including cognitive competencies, moral upbringing, and social skills, and focus primarily on students' academic achievement so they may perform well in the college entrance examination and elevate the school's reputation.

This pressure for academic competitiveness was even translated into the school practices of teacher evaluation in some private schools. Wei was frustrated by such practices in her private intern school. Before she started teaching in her intern school, she expected herself to be a passionate teacher who makes learning an enjoyable experience. However, during her teaching, she soon realized that there was a sharp contrast between her ideas and the reality in school. In this private school, teachers are under enormous pressure since their salaries are based on their students' academic performance.

Even vocational schools also entered into this college entrance competition. Yu, a student teaching in a vocational school, observed such an unexpected trend. She believed that the purpose of a vocational education is to provide students with effective occupational competencies so that they can obtain jobs after graduating from school. She did not expect to see staff in the vocational school pushing students hard to prepare for the entrance exams for technological colleges.

To our student teachers' surprise, such purpose of education "for grades and credentials" was also internalized by many students. Meng, a student teacher in a middle school, was shocked to learn that one of her student kept studying even at his recess time because he "[has] to get into a good high school." And Meng asked the student what he wanted to do after entering a good high school, he said he

cannot have fun since he then has to try to get into a good college. While the majority of the student teachers felt shocked by the reality of such a test-oriented purpose of education, when asked about how they would deal with it, most of them (70 %) felt there is not much they could do since it seemed to be such an intangibly permeating culture.

11.4.2 Pedagogy: Teaching Relevant to Life vs. Teaching to the Test

Besides their contrasting views on the purpose of education from their intern schools, most of our student teachers further found conflicts in perspectives of pedagogy with respect to what to teach and how to teach students.

Two items in the survey questionnaires focused on student teachers' pedagogical convictions. The results showed that an interactive approach to delivering life-relevant content for learning was held in high regard. 92 % of student teachers "highly supported" the statement that "content for learning should be focused on knowledge relevant and applicable to life rather than that focused on the test," and 72 % of them strongly agreed that "teachers should use interactive and innovative instructional strategies rather than didactic and monotonous lecturing and drilling." In the interviews, 86 % of them expressed their intentions to teach "useful" knowledge, knowledge that is relevant to students' life experiences and can be transformed into "portable" competencies. In addition, 76 % of them endorsed classroom instruction involving students in active learning through a variety of activities, including discussion, role play, games, projects, and so on.

Zhong, a student teacher of biology, frequently asked his students to collect news related to biological knowledge. And when he taught biology in class, he would use the news "as a catalyst to arouse their interest and help them understand the textbook content." Similarly, Jiang, another student teacher of Chinese literature, encouraged students to open their hearts for the poetic muse by using pictures of the scenery and matching music while analyzing poems.

However, the majority (82 %) of the student teachers found that in their intern schools, teachers in general still focused on delivering content confined to the textbook and relevant to the test by ways of direct lecturing and drilling. Students usually sit passively in class to listen and absorb the information delivered by the teacher. Ya-Lin, who student taught English in her intern school, experienced frustration when criticized by other English teachers as "too idealistic" because instead of telling students to memorize everything, she used the communicative way of teaching to help them truly prepare to use English in daily life.

The negative impact of this test-relevant approach was obvious to these student teachers. First, test-irrelevant subjects such as arts and physical education not included in the entrance exams were often ignored by the school and sometimes these class periods were even used to teach major subjects such as math and English.

On the other hand, those who taught test-relevant subjects such as math, English, and biology were not immune from the negative effects of such a teach-to-the-test mentality, either. They were often under great pressure to cover all the textbook materials in time and ensure that students performed satisfactorily on exams. Xian, a student teacher of biology – a subject included on the high school entrance examination, was told by her supervisor that she "[did] not need to do extra things (supplementary materials) that waste time," but just give more quizzes, tell students what might be tested on the exams, and help them underline the key points. What upset her even more was to see students internalizing such a teach-to-the-test mentality. When she taught extra materials not covered in the book, the students would begin complaining that they were lost and would ask her "when they can take quizzes to test their readiness for the school exams". Some interviewees pointed out an "astonishing" phenomenon, that one of the main reasons why their students show disinterest in learning is that "the subjects are irrelevant to the exam" or "there are no regular quizzes in class." In fact, 69 % of them noted that test-irrelevance was the main cause of low motivation.

Such a dominant test-driven pedagogy did affect some of the student teachers' intentions to stay in teaching. Unlike their passive reactions toward the relatively intangible test-oriented purpose of education, their responses to the more visible gaps in classroom teaching was more pungent. A few of them felt so frustrated that they even conceived quitting. Also, some of the student teachers felt disoriented and dangling between the life-relevant and test-relevant ways of teaching.

11.4.3 Classroom Interaction: Teacher as Equal Friend vs. Authority Figure

Besides the differences in purpose and pedagogy of education with their intern schools, student teachers in our sample also experienced a reality shock in how teachers and students should interact and how the classroom should be managed.

Two items concerning "student-teacher interaction" were presented on the survey questionnaires. The results showed that an equal-status relationship between teacher and student was held in high regard. The majority (83 %) of the student teachers approved of the statement that "teachers should give students ample freedom to do what they want to do," and 85 % of them supported that "teachers and students should have equal status in communication." The interview results reinforced such a tendency. Among the interviewees, two-thirds of them (68 %) expressed that they wished to build a friendly relationship with their students. They believed that they should treat their students as equal beings, respect their points of view, and play the role of a trustworthy companion. However, it is obvious that in most schools, the concept of teacher as an authority figure plays a dominant role. Only 21 % of the interviewees spoke of a friendly relationship as the dominant

norm in their intern schools, whereas the remaining 79 % of them observed that teachers were still playing the role of authority figure in class.

These student teachers also endorsed an approach to using positive measures to guide student conduct. 83 % of them were inclined to employ positive measures, such as treating students with love and patience, using encouragement rather than punishment, and reinforcing desirable behavior with praise and rewards. Lai, who taught in a vocational school, had a different way to approach her students from that of her supervising teacher did. Unlike her supervisor, who applied traditional authority figure of teacher and was very strict with the students, Lai preferred a gentler approach to build the student-teacher relationship. She encouraged a student "who was viewed by many teachers as lazy and disruptive" with the student's favorite sport – basketball. Another student teacher, Chai, also used such deliberate approach to build a trustful relationship with his students. Instead of using authoritative figure and strict rules to maintain classroom order, he showed love and care for his student, though it would take more time than the traditional approach, eventually he won students' trust and appreciation in return.

However, strict measures, including recording demerits, scolding, or even corporal punishment, appear to be the major discipline methods in many schools. 77 % of the interviewees noted the constant use of strict discipline in school, and 43 % of them revealed that their schools still applied corporal punishment, even though the education authorities have enacted laws to forbid it. Many student teachers reported a tremendous reality shock upon seeing how school teachers disciplined their pupils. Some of them were even "so depressed that [they] did consider giving up teaching at some point."

We also found that some of the students felt disoriented and grappling between two education models – the authoritarian and equalitarian way of interacting with students. After Qiong, student teaching in a public senior high school, observed what was happening in the classroom, he gradually thought that "being an authority figure in front of the class is not a bad thing;" otherwise, the students may "climb over your head" and give you no respect. Therefore, keeping a "healthy respectable distance from [the] students" could actually be a good thing for teachers to do.

In conclusion, most student teachers perceived a reality shock during their teaching internships because of the conspicuous gap between their ideal education model and how the schools actually practices in the real world. They found themselves confused and dangling between the traditional test-oriented way of teaching and the reformist way of teaching that they admired and pursued. Firstly, for the purpose of education, while the students teachers believed that education is meant to teach students in all aspects, their intern schools, however, tended to hone students' advantages in academic competition in order to gain access to better colleges. Secondly, for the way of instruction, while the student teachers aspired to teach knowledge that is relevant to life through innovative way of teaching, they found themselves in a school setting where knowledge confined to the textbooks was transmitted through direct lecturing. And thirdly, for the teacher-student relationships, while most student teachers preferred to play the role of a trustworthy and equal companion of their students, the reality in their intern schools in fact upheld

the belief in teacher as authority figure and endorsed a more strict disciplinary approach. Such gaps between student teachers' ideal reformist education model and the traditional one that schools tend to practice has exerted a negative impact on some student teachers' intentions to stay in teaching.

11.5 Discussions and Implications

In summary, this study found that this group of Taiwanese student teachers has established a set of beliefs and values concerning why to teach (purpose), what to teach (pedagogy), and how to relate to students (interaction), but it found that those positions were in direct conflict with what is really implemented in many schools. Such conflicts have placed these student teachers in a dilemma dangling between two contrasting ideologies of education; such a gap did exert a negative impact on some student teachers' intentions to stay in teaching.

The roots of these conflicts are indeed embedded in the larger context of education reforms implemented in Taiwan over the past decade. Since 1996, Taiwan has been undergoing major education reforms that have introduced new sets of educational purposes and pedagogies that differ from the traditional approach. Those conflicts most genuinely felt by these student teachers are indeed those between the traditionalists and the reformists.

11.5.1 The Traditional Test-oriented Culture in Taiwan

Before recent educational reforms began, Taiwanese education used to epitomize traditional Chinese/Confucian concepts and values. Education has been deemed as the prime road for upward social mobility in Chinese society for thousands of years, since the inception of the national "civil examination system" in the fourth century (Biggs and Watkins 2001; Siu 2004). Under that system, knowledgeable civilians were screened through consecutive examinations, and the most outstanding ones were promoted to government offices and enjoyed immense fame and prosperity. This upward-bound outlook had propelled generations of youths from the vast peasant population to study hard to pass the exams in order to win a bright future for themselves and glory for their family (Ho 1998).

In Taiwan, where the traditional Chinese/Confucian heritage has been well preserved in many aspects of social life (Hwang 2000, 2001; Wang and Lin 1994), a modern version of this centuries-old examination tradition was replicated. Fueled by extreme competition for resource and status in this modern industrial and capitalist society, individuals are under severe pressure to get ahead. Education is even more widely regarded as the primary road for upward mobility (Biggs and Watkins 1996). In order to ensure a fair screening process, a "fair and square" entrance examination system, analogous to the traditional civil examination, was established

to stream those hardworking and outstanding students into top schools and colleges to win valuable credentials for a brighter future (Gao 1999). In this sense, such examinations are indeed of high stakes with immense consequences. Thus, good performance on the examinations has become a crucial goal for many students and their families; and for many schools and teachers, to help their students earn high grades and perform well on these high-stakes tests and exams is an important mission (Levenson 1958; Smith 1991). In such a test-oriented culture, schools tend to discreetly place greater emphasis on developing students' cognitive skills than their physical buildup or social skills; they may also tend to highlight the instructional strategies and disciplinary measures conducive to such test-oriented learning. To fulfill their expected roles, teachers tend to conscientiously deliver and elucidate knowledge in the textbooks, provide abundant exercises and quizzes to make sure students learn, and create an orderly and focused classroom atmosphere so that students can focus on learning tasks (Smith 1991). This traditional education, with its examination-oriented goal and pedagogy, has been in practice in Taiwan for the past several decades and has formed a powerful tradition (Huang 1996). That is why many student teachers in our study still found such examination-oriented education and test-oriented culture prevalent in their intern schools.

11.5.2 Recent Educational Reforms in Taiwan

As Taiwan has gradually become a more open and diverse society, the educational tradition with "syndromes," such as sacrifice of a whole-person education for an over-emphasis on cognitive skills, irrelevance of school subjects to real life, and creation of an "examination hell," has been met with increasing criticism (Huang 1996; Wang and Lin 1999). Scholars studying abroad and exposed to the Western educational philosophy and practices began to advocate an education that differs drastically from the traditional. First of all, they advocated an education aimed to inducing individual potential and special qualities (Education Reform Commission 1996), as implicated in the Western tradition. Second, they promoted the concept of teacher as a "companion to students on their common way to exploring the truth" as embodied in the Socratic tradition, in contrast to the Confucian image of "an authority figure in whom truth and virtues dwell", a learned scholar (*jingshi*) who transmits knowledge to students and a moral figure *(renshi*) who sets an example for students to follow (Ho 1994).

Increasing social criticism proposed by these "reformists" has gained public support and pushed the government to implement a major overhaul of education in order to liberate it from the grip of the test-oriented culture. To realize these ideals, the government has implemented a series of major reforms in the school curriculum, instruction and campus/class atmosphere, and college admission system since 1996 (Ministry of Education 1998). During this past decade or more, the public and educational establishment has been divided on the propriety and effectiveness of the reforms (Shi 2007). Proponents strongly support the reformist endeavors and claim

that they have redressed the problem of the test-oriented tradition and provided new hope for education, while opponents criticize that these reforms as indiscriminate implantation of policies from abroad that have destroyed the harmonious operations of the old system (Shan 2000).

It is found that criticism, discontent, and resistance against the current educational reforms are prevailing among teachers and schools. Many schools are slow to adopt the new practices, many teachers resist adopting the new curriculum and pedagogy, and parents still press teachers and schools to prepare their kids for the high-stakes examinations so that they may get into top high schools or colleges (Chou 2003; Hwang 2003). In contrast to the resistance in the schools, most teacher education programs tend to embrace the reformist spirit and support the reform endeavors. This might partly be due to the fact that many of the teacher educators themselves are scholars who have studied abroad and tend to embrace a more progressive view of education (Chou 2003; Huang 1996). As is shown in this study, such a gap in attitudes toward the educational reforms between many intern schools and teacher education programs did create a potential conflict for student teachers who found themselves dangling between the traditional and the reformist way to education.

11.5.3 Reality Shock Between Contrasting Ideologies

Previous studies conducted in several countries found that the major reality shocks experienced by student teachers included the heavy workload, problematic relationships with parents and school administrators, and challenges in motivating students, dealing with individual differences, and managing the classroom (Ganser 1999; Marso and Pigge 1992; Veenman 1984). These reality shocks are largely emerging from the gap between "the ideal" ("education should be supported by the community") and "the reality" ("they don't care about education at all!") or between the "theory" ("students should be motivated to learn") and the "practice" ("I don't know how to motivate them!"). Negative factors in the "real world" of the school have created a sense of disillusionment and have taken a large toll on teacher retention (Dinham and Scott 1998; Murnane 1995). In this sense, new teachers have essentially experienced a reality shock between "theory" and "practice".

Compared with their Western counterparts, on top of their common gaps between theory and practice, it is found that the Taiwanese student teachers experience an additional type of reality shock; that is, the gap between two contrasting and competing educational philosophies and pedagogies. As both the traditional and reformist camps have strongly held "ideals" about why to teach (purpose), what to teach (pedagogy), and how to relate to students (interaction), the student teachers not only have to face the problems of how to translate ideals ("teach-to-life pedagogy") into workable practice ("designing an interesting life-relevant lesson plan"), but also have to combat contrasting versions of educational ideals and goals ("teacher as an equal friend" vs. "teacher as an authority figure") in which they have to decide

which teacher image/role to take in order to form an appropriate relationship with their students.

11.5.4 Implications for Teacher Educators and Policy Makers

Two implications may be drawn from this study. First, as beginning teachers are the ones who are most vulnerable in the battle between the traditionalists and the reformists, it is important for teacher educators to help their students to discern the very philosophical and cultural roots of different camps of educational thought in the process of change, construct a coherent set of personal theories concerning why to teach, what to teach, and how to teach, and endeavor to put such theories into workable practices prior to and in the process of their student teaching internships. With such reflective pre-service preparation, these new teachers may not easily become frustrated and disillusioned by the "harsh" reality of the school life and may gradually exert an influence on the school by bringing in fresh outlooks.

Second, recent education reforms both in the US and Taiwan seemed to have touched upon one important issue: whether to approach a test-oriented culture or to escape from one. As the Taiwanese experience shows that high-stakes testing has had a certain negative impact on the purpose, pedagogy, and interaction aspects of education and on student teachers' intention to stay in teaching, it would be advisable for policy makers in the US to look carefully to the East, at the experiences of the East Asian Confucian Circle countries, including Japan, Korea, China and Taiwan, who have implemented reforms in recent years in order to liberate education from the grip of the test-oriented traditions (Lin 1998; 2006). Only by carefully understanding the strengths and weaknesses of a long-surviving test-oriented tradition can policy makers understand the long-term impacts and make wise decisions on whether to continue enforcing policies that intend to raise quality through high-stakes testing in school.

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Chapter 12
A Chinese Model of Citizenship Education in Taiwan: Under the Influence of Globalization, Localization and Cross-Straitization

Chuing Prudence Chou

Abstract Although the trends of western democracy and the Confucian tradition have had a great impact on the formation of Taiwan's recent citizenship education policies, a third force, derived from the cross-strait relationships between Taiwan and China, has also played a critical role in shaping these policies. This chapter is an attempt to portray citizenship education in Taiwan as one of the manifestations of Chinese models from a multi-faceted perspective including Chinese cultural heritage, western democracy, and the cross-strait relationships with China. The author argues that, like many other countries in East Asia, citizenship education is a contested term in Taiwan, which fulfills the needs of social change, government policy and personal development. It has been found that the concept of national identity received very little attention in current Taiwan's citizenship education thanks to her ambiguous political status with China. Nevertheless, an image of 'being Taiwanese' is increasingly promoted and receives more and more attention in curriculum and instruction in Taiwan.

12.1 A Changing Regional Context in East Asia and Taiwan

East Asia has been undergoing rapid social and economic development and changes that transcend national borders. The region has become one of the foci of world attention because of its fast growing numbers of in-bound and out-bound students and the expansion of quality education services (UIS 2014). It has also been renowned for its culture of frugality, work ethic and family values with Confucius heritage. What's more important is that the region is in the process of rapid demographic transition, a reflection of its increased life expectancy, and a declining birth rate which has created an impending shortage of students at all levels of education

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(Chen 2001a). Nonetheless, East Asian economies continue to experience fundamental changes in a time of globalization. Despite its great cultural and geographical diversity, a process of regional economic cooperation and integration is emerging.

After 1949, China was later divided by the superpowers into two parts, Republic of China (Taiwan) and People's Republic of China (PRC) across the Taiwan Strait, as a result of its devastating civil war. Nevertheless, Taiwan's traditionally high educational zeal originated from the period of Japanese colonization and Chinese traditions. Coupled with its strong desire for modernization and prosperity, Taiwan has served as a reliable testimony of economic development in East Asia which shares the common traditions of Confucian educational philosophy and strong kinship within family ties. These are the foundations of the spirit of industry, peacefulness and order that contribute to high economic incentive, respect for the elderly and authority, and the harmony of society often witnessed in Taiwan (Hwang 2012; Chen 2001b).

Despite the diplomatic isolation, Taiwan is expected to promote and strengthen regional collaboration since her access to the World Trade Organization (WTO) in 2002 and the passing the Economic Cooperation Framework Agreement (ECFA) with China in 2010 (Fan 2014). Nevertheless, such regional integration and collaboration, as has taken place in East Asia, can also further weaken the ability of each government to promote its own public policies, especially in the making of citizenship that fulfills the needs of the people and encourages state cohesion (Kahler and Lake 2003).

12.1.1 The Impact of Democracy on Citizenship Education

The Chinese model of citizenship education in Taiwan can be described within the following themes: democracy, Confucian tradition and cross-straitization. Since the lifting of Martial Law in 1987, citizenship education in Taiwan has progressed alongside the evolution of a series of democratic movements, resulting in the phenomenal growth of political opposition parties and elections at all levels, non-governmental organizations (NGOs) and the rising impact of the internet social media in Taiwan. At the same time, East Asian coalitions that focus on human rights, and sustainable environment development have been formed. This trend has been accelerating since the economic and political rise of China and the democratization process in Taiwan whose educational development at all levels has accelerated over the last two decades (Chou and Ching 2012).

For example, in terms of the changing profile of textbooks, a study examined two sets of Taiwan's social studies textbooks for grade four, published from 1978 to 1995 (the first set between 1978 and 1989, the second between 1989 and 1995), to determine whether or not they reinforced the dominance of traditional Chinese cultural identity and neglected the diverse representation of different gender, cultural, ethnic groups and so forth (Su 2007). Also, the textbooks were analyzed to determine

whether their ideology had changed or not owing to the political and socioeconomic pressures Taiwan experienced after the democratization process of the late 1980s. The research findings indicated that both the historical interpretation and the ideology of a unified Chinese national identity were emphasized in both series of social studies textbooks before 1995. These two series often legitimated the notion that Taiwanese ancestors had migrated from mainland China, a notion that the Kuomintang (KMT) ruling party used in school textbooks as a means of asserting political legitimacy to convey special values, assumptions and principles that reflected the interests of the political authority (Apple 2004; Apple and Christian-Smith 1991). In line with this approach, many politically and culturally sensitive and controversial issues were removed from textbooks before the mid-1990s (Su 2007). Later, a nine-year integrated curriculum reform, started in 2001, attempted to increase the number of materials at every level of schooling containing local history, geography, culture and the arts. In addition, as more and more calls to respect social pluralism and the cultural diversity of all the ethnic groups in Taiwan have been heard, a variety of Taiwanese dialects (and possibly the inclusion of foreign parents' mother tongues in the future) have become part of the required courses at the primary level, in contrast to the former hegemony of Mandarin in the school curriculum before 1987. It is obvious that local and indigenous forms of knowledge and values are receiving greater recognition in the recent education reform (Yang 2001).

12.1.2 The Impact of Confucius Values on Citizenship Education

A society with strong social capital (such as educational support for offspring) is one in which social trust facilitates cooperation and networking for mutual benefit (Coleman 1990). The Chinese culture emphasizes family values and a sense of belongingness to one's clan. As a result, confusion may arise among ethics, law and the common good in Chinese societies, and family values may conflict with public interests. Unlike many developed countries whose education policy is very much influenced by economic and technological development, in the Taiwanese context, families are invited into decision-making processes; therefore, the process of forming a social consensus, including any forms of education policies for children, should take the family factor into consideration.

After comparing ten countries, including China, Egypt, Indonesia, Pakistan, Papua New Guinea, Soviet Union, Korea and Zaire, Thomas Murray (1992), proposed some items that appear to be necessary within the national development network, including moral/social values. Murray indicated that students should be educated adequately with values related to national development and cultural traditions. Drawing on Henry Giroux's ideas, we should integrate technology training in "civic courage" into the present education curriculum. In so doing, schools can equip students with passion, imagination and wisdom so they can be challenged

regardless of economic, political and social pressure (Giroux 1985). This is especially timely in conducting research on value clarification in the context of citizenship education. What we have at present in Taiwan is that, science and technology are taking over education to a great extent in the name of social modernization and national development (Elwyn 2000).

Taiwanese society has been very much influenced by Confucian values, such as political authoritarianism, the family system, academic examination systems, saving habits, local organization and family networks (Tu 1995). Education has always been regarded as a priority in Confucian culture, and the notion of studying implies hard work, effort, persistence, cultivation and rigidity, whereas playing games is considered idleness (Hwang 2012; Yao 2000; Zhou 2000). Consequently, Taiwanese society places much emphasis on educational credentials (such as a university degree) and the practice of taking examinations. As indicated earlier, after the national government withdrew from mainland China to Taiwan after 1949, the priority was to strengthen the Chinese identity and sovereignty of China over Taiwan. During that period, many aspects of Taiwanese culture and languages were banned, especially after the 228 (February 28) Incident in 1947, in which disputes arose between Chinese troops and local people.

According to Yang (2001) and Chou (2008), different periods of Taiwanese education reform seem to inevitably reflect an ideological conflict focused on the hope of regaining Taiwan's own national and cultural identity. The country has made a great effort to include a greater proportion of instructional content related to local history and geography along with local events in the recent curriculum reform since the mid-1990s. In the wake of the movement toward multiculturalism and respect for all of Taiwan's ethnic groups, schools have assumed authority over the curriculum, which prior to the 1990s was dominated by content related to the mainland. The trend toward localization has led to efforts to establish the Taiwanese identity and emphasize national prosperity as part of education reform measures, especially since the transfer of the political regime in 2000.

From 2000–2008, when the Democratic Progressive Party (DDP) administration was in power, President Chen, an advocate of Taiwanese independence, opposed the one-China policy that mainland China had proposed. During Chen's presidency, there was a lack of legislation that forged cross-strait academic exchanges and cooperation. President Chen, therefore, decided to halt cross-strait relations through the so-called de-Sinicization policy. First, in 2005, the civil exams were refocused on Taiwanese local history rather than Chinese history, and guidelines for the new high school curriculum were shifted from Chinese history to world history, rather than traditional Chinese history as domestic history. The proportion of Chinese classics in the literature curriculum was also decreased. The attempt to replace Chinese cultural bonds with the local identity of Taiwan was emphasized much more than before. The government highly promoted awareness of local culture, heritage and language in the form of a self-determination initiative.

With a more globalized economy and society, coupled with Taiwan's increasing dependence on China as a trading partner, the Taiwanese education system

has acted as a pendulum, swinging between globalization and localization in the last decade. As a small island, Taiwan cannot avoid participating in the processes of globalization, in terms of world trade and cultural exchange, occurring between different regions of the world. The localization of education has also made the Taiwanese more aware of their own cultural heritage and allowed younger generations to search for and construct their own identities often known as "Taiwanese." Therefore, the current idea of citizenship education reform is to integrate the trends of globalization and localization in order to create a clear understanding of the world and Taiwan itself (Chou and Ching 2012; Yang 2001).

12.2 The Impact of Cross-Straitization on Citizenship Education

As indicated earlier, though the influence of democracy and the Confucius heritage has a great impact on Taiwan's citizenship education policies, a third force, stemming from the cross-strait relationship with mainland China, has also played a critical role in shaping Taiwan's citizenship education policies (Chou and Ching 2012).

The year 1987 played a significant historical role in cross-strait relations because, not only did Taiwan lift martial law in that year, but it also granted permission for veterans drafted by the armed forces from China during the civil war, to visit their families in China. Hence, the cross-strait relationship entered a new era of communication.

Concerning student exchange programs, in November 1987, Taiwan loosened its policy over Chinese visitors, especially for those overseas and distinguished professionals who wished to visit Taiwan. Since 1990, Taiwan has granted more access to Chinese citizens who have made contributions in fields such as academia, culture, sports, mass media communications and the arts. Moreover, in 1993, Chinese professionals and students were given the additional opportunity to visit Taiwan for educational and cultural purposes. According to statistics, 18,907 Chinese students visited Taiwan officially between January 1, 2002, and October 31, 2009. Though statistics are lacking about the reverse visits, it was expected that many more Taiwan students would be visiting China during their summer and winter vacations. With this, we can see that there is evidence of significantly skewed data from Taiwan's side compared to those of its counterpart in China. Furthermore, Chinese graduate students pursuing research who were sponsored by Taiwan were granted a period of from 1 month to a year to live in the country. The annual quota was 1000 students per year in the past. Since 1996, Chinese graduate students have been able to apply for a full scholarship of up to 3 months to conduct research related to their theses at local universities in Taiwan. Beyond that, more than 235,591 Chinese professionals in the cultural and educational sectors, out of a total of 2,712,572 Chinese visitors in 20 categories, traveled to Taiwan during the 1988–2009.

12.2.1 Development of Citizenship Education in Taiwan

As Gilbert (1996) indicated citizenship is often regarded as a contested form. Some defined it as an entity to a nation state, which requires her people giving allegiance and loyalty. The state, in return, provides her citizens with legal and political rights (Howard 2006). Others regard it as individual rights or a sense of shared loyalty over national cohesion. Citizen participation in government can also be regarded as a priority among other civil obligations. As to this aspect, Mutch (2004) conducted a survey of educational policymakers in the Asia-Pacific region with a framework programmed by the OECD/CERI1 (2001). The project attempted to investigate the nature of citizenship characteristics in educational policy in New Zealand, Australia, Hong Kong and Taiwan. The research findings indicated that most education policymakers in the 1980s and 1990s in Taiwan were convinced that schools would fulfill their mission as learning organizations, and the citizenship education curriculum was expected to focus on civic knowledge, moral behavior and civic values with an emphasis on social cohesion, national identity, self-cultivation and democratic values (Pederson and Cogan 2002). Nevertheless, after the implementation of the new Nine-Year Integrated Curriculum Plan in 2001, an interdisciplinary approach was initiated between the seven subject areas from years 1–9, including languages, mathematics, social studies, nature and technology, arts and humanities, health and physical education and general activities. In contrast, the old civic education curriculum emphasized more knowledge transmission at the expense of student participatory citizenship and critical thinking. The new curriculum plan, however, was designed to improve citizenship through a process of inquiry and discussion over local culture and social issues, with the hope of enhancing value clarification when students faced the controversial issues such as 'Taiwanese national identity', 'Chinese nationalism' and 'indigenous cultural awareness'. Nonetheless, the policymaking process of this new curriculum was considered a top-down one instead of a grassroots approach. The study concludes by highlighting the importance of the contextual nature of any curriculum development in citizenship education, including a better understanding and inclusion of one's historical, political and social contexts in dealing with policymaking (Mutch 2004; Lui and Doong 2002).

It is worth noting, when the seventh National Education Conference was held in 1994, an atmosphere of change was developing in Taiwanese society, due to the liberalization of both the political and the economic environment. The whole society at the time was demanding the deregulation, democratization, liberalization and diversification of education. Almost two decades later, the status of the education system both in Taiwan and abroad has changed in many ways. A globalized society has arrived earlier than expected due to the rapid development of information technology. In Taiwan, apart from the typical changes resulting from globalization, Taiwanese society has faced additional challenges in the last decade, such as: demographic changes (a drastic declining

birthrate, an emerging aging population and a diverse population composition from international marriage), the migration of industries to offshore locations (China, in particular), a rising unemployment rate (especially among the youth), an excess number of universities and colleges awaiting consolidation or closure, an urgent need for transnational personnel following the upgrade and transformation of industry, a continuing debate over national identity and ideology in education (Taiwanese or Chinese), issues related to educational opportunities and cultural inheritance for social vulnerable groups, the unequal distribution of educational resources,, and an imbalance in the supply and demand of qualified school teachers (Chou and Ching 2012).

In the effort to respond to Taiwanese society's eagerness for educational reform and to implement the government's innovations in education policy, the Ministry of Education (MOE) (2010a) convened the eighth National Education Conference in August 2010 to construct Taiwan's educational blueprint for the next 10 years (2011–2021). In 2011, as Taiwan (the Republic of China) celebrated its 100th Anniversary, the 9-year universal education has existed for more than 40 years, the enrollment rate of school-aged children is above 99.9 %, the postsecondary education opportunity rate has reached 100 %, higher education's expansion has received popular approval, the illiteracy rate of students over 15 years old has dropped to 2.09 %, and the education budget-to-GDP ratio reached 6.51 % in 2010 (MOE 2010a).

Education policy aims to no longer focus on quantity but quality in Taiwan. While Europe and the United States have suffered from the global financial downturn since 2008, Taiwan, which regards education as the foundation of the country, has announced a substantial increase in its education budget, revealed a new vision for national infrastructure called the 'Golden Decade' and formulated six directions for development in the future, namely, innovation, culture, environmental protection, constitutional politics, welfare and peace (Ma 2011). Thus, the eighth National Education Conference focused on six topics in education: 'life and character education'; 'education for human rights, the rule of law and gender equity'; 'media literacy and information technology'; 'ecological and environmental education'; 'security and disaster prevention education'; 'art and aesthetic education'; and 'implementation of the sustainable campus plan' (Kuo 2010). In addition, a series of infrastructural improvements was also under review, including the new 12-year basic education program which revises its new curriculum guidelines with an emphasis on the development of individual talents and interests with appropriate teacher training programs, civil resources promotion and so forth. Thus, the promotion of citizenship education is expected to go beyond traditional classroom education with a different account of integration and combination of in-school and extracurricular learning activities, as well as various channels in daily-life practices. Examples include how to equip young children with skills such as how to follow traffic regulations, how to volunteer in the community, and how to serve in the student association, etc. (Chou and Ching 2012).

12.2.2 The Upcoming Challenges

The general public in Taiwan has many concerns related to education. Heavy pressure associated with high school and university entrance exams still exists on school campuses, and students suffer from the double pressure of academics and finances (for supplementary education). With gang members invading campuses, incidents of bullying, drug abuse and the violation of rules are becoming increasingly frequent. Though Taiwan's students at the primary and secondary levels continually win prizes in international academic competitions, including the Programme for International Student Assessment (PISA), the Third International Mathematics and Science Study (TIMSS) and International Mathematical Olympiad, most students study without much curiosity and show little interest in outside reading (Chou 2008a). In addition, Taiwan has also encountered the following social changes that create a great deal of challenges on citizenship education (MOE 2010b).

12.2.3 The Rise of the Internet Age

With the rapid development of the Internet, it has become cheaper and more convenient to get information. The Internet has not only expanded people's visions but also altered the traditional school system. The rise of the Internet offers adults a great opportunity to continue to study throughout their lives, while, on the other hand, it helps schools to offer courses designed according to individualized requirements and multiple intelligences. Therefore, with this rapid transition to a global society, the Internet has become an important way to reinforce e-learning and connections of many kinds, such as those social and informative in nature, improve information flow and promote social agendas among students.

The arrival of the virtual world and cloud computing has not only provided greater access to information via the Internet but has also resulted in various problems, such as the online subculture, that has appeared among teenagers and that deviates from the mainstream. Moreover, the issue of Internet addiction, which is a serious concern in Taiwan, has divided parents, teachers and students. In particular, moral education is more important than ever. The challenging question of how to educate the next generation in such a complex environment deserves more creative and unconventional policies in the field of education.

12.2.4 The Emergence of a Low Birthrate and an Aging Society

In recent years, Taiwan's population structure has changed into a heterogeneous one with a low birthrate and an aging population, factors that will eventually have a great impact on the country's economic, social and educational development. The

birth rate has dropped, from 410,000 newborn babies in 1981, to 270,000 in 1998, to 191,000 in 2009, which is the lowest level in the last 50 years. Many schools (especially in the remote areas) have found themselves confronted with serious problems related to the need to lay off teachers and shut down schools. Universities will face a series of institutional closures or mergers in 2016, when the first wave of members of a declining population reaches college age (Hu 2010). In addition, among this younger generation, according to statistics from the MOE (2010a), children of foreign nationality and of parents of whom one is Chinese account for nearly 10 % of the total student population and 3 % at the lower secondary level in Taiwan (MOE 2011).

Furthermore, in 1993, the population ratio of the elderly, those over 65 years old, surpassed 7 % for the first time. Since then, the percentage has grown gradually each year, and it will reach 20 % in 2026. It is clear that the aging of the population will be related to a rising dependency rate and will place an immense burden on society. Under such circumstances, the Taiwan school system and its educational resources will need to be adjusted and reconfigured so that they are more suited to the changing society.

12.2.5 Impact of the M-Shape of Education Development

With the transition of Taiwan's domestic economic and social structure, phenomena such as an uneven distribution of regional resources, varied teaching quality in schools and differences in students' abilities to learn in urban versus rural areas have been found to exist in the education sector, too. Moreover, according to the Japanese writer Ōmae Ken'ichi (1990), those vulnerable social groups that are influenced by economic factors or family status (e.g., those with single parents or only grandparents) have become important reasons for the M-shape of educational distribution. Children who have grown up in such environments are usually subjected to poverty and crime due to the lack of cultural capital and role models (Katz et al. 2007). As the family structure declines and is transformed in Taiwan, an integrated task force will be needed that can collaborate with various government departments, such as those in education, social welfare, healthcare and the police, to provide support to these at-risk children.

12.2.6 Challenges Related to Climate Change and Environmental Sustainability

Over the last 10 years, Taiwan has been hit by a series of natural disasters, such as the devastating 921 Earthquake of 2000, an unexpected Morakot Typhoon, the 88 Wind Hazard in 2009 and a serious drought island-wide in 2015, which resulted in unprecedented consequences to educational facilities, especially in the

disadvantaged regions (MOE 2009). According to 'World Bank Natural Disaster Hotspots—A Global Risk Analysis' (Arnold et al. 2005), Taiwan is one of the areas of the world where natural disasters occur most frequently. Thus, more educational awareness is required to enhance citizens' understanding of global climate change and the balanced coexistence of economic development and environmental protection.

In particular, sustainable development is the focus of the United Nation's plans for (UN) educational development in 2005–2014 (United Nations 2011). Therefore, authorities at all school levels have to consider how to integrate the concept of 'sustainable development' into the existing school curriculum and instruction as one of the core competencies to raise students' level of literacy in this area.

12.2.7 National Identity Conflict Among Students

There have also been instances of a struggle to define its identity that has occurred. In an International Civic and Citizenship Education Study (ICCS) study of civic and citizenship education in 37 countries around the world in 2009, results for Taiwan (referred as Chinese Taipei) showed that Taiwanese teenagers (14 years old) scored much lower than the average in regard to "trust in national government, political parties, media, schools, and people in general" (Schulz et al. 2010a). Moreover, Taiwan (referred as Chinese Taipei) participated in an IEA study of civic and citizenship education (Schulz et al. 2010b) with 37 other countries, and the results showed the overall scores of Taiwanese 14-year-olds ranked fourth overall. However, on several questions regarding 'trust in national government, political parties, media, schools and people in general' the participants scored much lower than the average. In particular, almost three-quarters of Taiwanese secondary students stated that they did not trust their political system overall' as (Schulz et al. 2010a, b). Why did this happen among Taiwanese teenagers? Clearly, there is a feeling of distrust among fourteen-year-olds of political institutions in Taiwan. These relatively low scores suggest that citizenship education among Taiwanese teenagers has room for improvement.

However, at the same time that high-level cross-strait relations and economic cooperation have developed to an unprecedented degree due in the past 6 years, cultural and educational exchanges have also increased. Recent changes in the political atmosphere between Taiwan and mainland China have led to the lifting of the long-time ban on recruiting Chinese students to study in Taiwan. Since September 2011, an increasing number of Chinese students have been admitted to Taiwanese universities as degree-seekers. Meanwhile, short-term exchange programs between the two sides number in the thousands. Throughout this process, the multifaceted and dynamic way in which traditional Chinese culture and intensifying cross-strait interactions are shaping national identity is giving rise to great uncertainty about the future in Taiwan.

Research indicates that people in mainland China and Taiwan have, throughout time, been able to justify their national identities in a subtle way, a phenomenon that remains evident today (Hao 2010). Education plays a major role in shaping national identity in Taiwan, and with the ongoing cross-strait cultural and education exchanges in higher education, this has become more legitimate than before. Higher education institutes (HEIs) in Taiwan are expected to assume a key role which will eventually lead to constant, close communication and exchanges between faculty members, students and others in China and Taiwan (Chou and Ching 2015). In addition, China's rise will most likely have an impact on re-shaping Taiwanese identities as well as leading to the emergence of a new profile for Chinese people. Whether or not these new transformations will take place depend on the future of cross-strait relations.

12.3 Conclusion

The inevitable growth of concern over citizenship education throughout Taiwan has become a major topic of discussion over the last two decades. The trend of globalization and localization has affected many educational sectors in East Asia. Taiwan's efforts to globalize and democratize its education system while preserving its Chinese cultural heritage with local identity has led to new dilemmas for citizenship education in terms of undeclared or even uncertain status of her national identity. Among the most significant changes is the increasing number of educational and cultural exchanges with mainland China which is unprecedented since 1949. These multifaceted forces of the Confucius tradition, democratization, and cross-straitization have shaped a unique Chinese model in Taiwan's contemporary citizenship education, which has distinguished itself from her other Chinese counterparts, namely, China, Hong Kong and Macau.

For centuries, Taiwan has been faced with identity conflicts. Whether under Japanese colonial rule (1895–1945), during the subsequent period of re-Sinicization after World War II (1949–1987), or throughout the de-Sinicization era under the Lee Teng-hui and Chen Shui-bian presidencies (1988–2008), the Taiwanese people have been subjected to a complex interplay of political and socio-cultural forces shaping their identities (Wilde 2005). Today, the constant dilemma in Taiwan over national identity continues to influence her citizenship education at all levels (Chou 2014). Despite the continuing cross-strait exchanges over the last two decades, Taiwan's general public and college students still remain suspicious about China's potential attempt for reunification.

In sum, it is worthwhile to see how cultural heritage, western democracy, and the cross-strait relationships with China will continue to shape and transform citizenship education in Taiwan, whose national identity still receives no consensus.

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Chapter 13
Impacts of Online Education on Existing Education Models: Empirical Evidence from Taiwan

Jonathan Spangler

Abstract Recent years have seen an explosion in the popularity of online education, yet the impacts of online education on existing education models, teachers, and students are not fully understood. While the rise of online education is evident in countries around the world, students in East Asian societies have been particularly active in their online educational pursuits. This chapter seeks to further understand the significance of these trends by using empirical evidence from a nationwide survey conducted in collaboration with the Election Study Center in Taiwan. In particular, it aims to identify the impacts of online education on the existing education model, teachers, and students. The results indicated that online education has had major impacts on the existing education model. It was seen as more Western, active, top-down, and focused on knowledge acquisition than offline education, which suggests that offline education represents a significant departure from the approaches to teaching and learning that locals have come to expect. The perceived impacts on teachers included an encouragement of teaching quality improvement and lessened the overall burden. As for students, the perceived impacts have been mostly positive, with respondents viewing online education as encouraging independent learning, providing more opportunities to be critical of teachers, and not necessarily discouraging creativity or asking questions. Respondents also suggested that online education supplemented the breadth, depth, and richness of educational opportunities, suggesting that some respondents viewed local educational opportunities as inadequate. Detrimental impacts on students included decreased opportunities for face-to-face interaction with peers and teachers as well as mentions of assessment problems and student apathy.

The survey used in this study was conducted in collaboration with the Election Study Center, National Chengchi University, Taiwan. The research was funded in part by a grant (102 2410 H 004 206 MY2) from the Ministry of Science and Technology, Executive Yuan, Republic of China, Taiwan.

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13.1 Introduction

As access to and familiarity with the Internet have proliferated over the past two decades, online education has become an increasingly influential force in many countries around the world. East Asian societies have been particularly active in their online educational pursuits as institutions in both the public and private sectors contribute to the development of online education services. As global leaders in terms of the availability of and participation in online courses as well as the relative maturity of their markets for online education, understanding the reasons for and impacts of trends in online education in East Asian countries is important both domestically and internationally. While there are few signs that traditional, brick-and-mortar classrooms are immediately at risk of being supplanted by the rise of online courses, the phenomenon nevertheless has important implications for existing education models, teachers, and students.

The growth of online education has been tightly linked to globalization and the development of the Internet, both of which have been perceived historically as Western-centric. Further understanding the impacts of online education in East Asia is therefore particularly important because of the tensions between local and foreign education models that exist in the region. As the education systems and ideologies of the U.S. and other advanced Western economies have shaped those of countries around the world (Sparapani et al. 2014), it raises the question of whether or not online education can be seen as a part of these global changes.

Within the East Asian region, Taiwan presents an interesting case for education research because of its history of educational development. The education system today has been influenced by traditional Chinese, imperial Japanese, and U.S. education models, global political and economic trends, as well as local Taiwanese politics and society (Chou and Ching 2012). Thus, while Taiwan itself is a society of predominantly Chinese descent, the Taiwanese education model represents a hybrid of forces that have shaped it historically. This study seeks to further understand the significance of global trends in online education in countries and communities of Chinese descent, taking Taiwan as a case study. Focusing specifically on the role of online education in such societies, the study attempts to determine the impacts of online education on (1) the existing education model, (2) teachers, and (3) students.

13.2 Literature Review

13.2.1 Defining Online Education

Distance education, the historical precursor to online education, is defined by its physical and sometimes temporal separation between teachers and students (Wallace 2003, p. 242; Moore and Kearsley 2012, p. 2). Inclusive of a wide variety of media

for instruction and distribution, the term has seen a decline in usage since 2002 (Ngram Viewer 2014) as the Web has gained traction as "the de facto standard platform for distance education" (Chen et al. 2010, p. 1222). Though it is widely accepted that online education is a subset of the broader concept of distance education, past studies of online education have used many related terms with often overlapping and sometimes conflicting definitions. These terms typically consist of a single adjective-noun collocation with the descriptors 'online,' 'e-,' 'virtual,' or 'Web-based' modifying the terms 'education,' 'learning,' 'instruction,' 'course,' or 'class' (See, for example, Farrell 1999; Rosenberg 2001; Vonderwell 2003).

This study uses the terms 'online education' and 'online course,' the latter of which describes a discrete, institutionally organized instance or series of instances of online education. The term 'education' implies both teaching and learning. Public perceptions of what constitutes online education vary. At one end of the spectrum, a narrow interpretation would require that it be administered by an accredited educational institution, incorporate a system for assessment, offer participants evidence of completion, such as credits or a certificate, and have a defined start and end date. At the other end of the spectrum, a liberal definition of online education could be inclusive of digitally accessible materials in any form, such as text, audio, or video, that are offered for the purposes of learning. In this study, online education is defined as fulfilling the following criteria:

1. It is intended for educational purposes by any institution.
2. It is accessed entirely through the Internet, whether on a non-mobile or mobile device.
3. It incorporates a system of student assessment or progress tracking, either formal or informal.

By definition, this includes paid or free online courses offered by institutions that are public or private, for-profit or non-profit with synchronous or asynchronous teacher-student and/or student-student interaction. This definition of online education integrates much of what has been described by earlier studies (e.g., Rosenberg 2001, p. 28; Wallace 2003; Wang and Reeves 2004; Jung 2001; Lee 2010, p. 278; Allen and Seaman 2014, p. 6).

Online education is necessarily contrasted with its opposite. For lack of more accurate vocabulary, the terms "offline" and "classroom-based" are used in this text. In the Chinese-language version of the questionnaire distributed to respondents as part of this study, the term *shiti kecheng* was used. Lacking a direct English equivalent, *shiti* is defined as a "thing that has a material existence (as opposed to a conceptual, virtual or online existence)" (MDBG 2014). The term *kecheng* can be translated into English as either "course" or "class." In order to promote consistency and data reliability, the definition given above was provided to questionnaire respondents and is used throughout this chapter.

13.2.2 Online vs. Offline Education Models

The content and pedagogy of online courses are simultaneously a reflection of their offline counterparts and a distinct phenomenon that has developed out of different contexts. On the most fundamental level, the similarities between online and offline education models are unmistakable. Both involve the acquisition of knowledge and skills, employ incremental approaches to teaching and learning, rely on repetition of course material to encourage memory retention, have systems of quantitative and qualitative assessment, and are organized along the lines of the basic teacher–student framework. There are many reasons for the relative homogeneity of online and traditional offline education models. In some cases, the use of offline practices in the online context is the result of their effectiveness, as demonstrated by empirical research in the field of education. Incremental learning is but one example. In other cases, the use of offline methods is more a byproduct of hesitancy to challenge the status quo in education, regardless of the possibility that doing so could have advantages in different contexts. The teacher–student relationship, for example, may be not so much a necessity in online learning as a relic of the context of offline education historically.

Needless to say, despite the many similarities in the education models used in online and offline courses, there are also notable differences. These relate to teaching and learning methods, delivery of course content, administration, assessment, and teacher–student and student–student relations. Some of these are the result of the newfound capabilities of information technology. The design and delivery of course content, for example, can make use of capabilities such as interactivity, real-time updating, and a wider range of multimedia technologies that were previously unavailable or more difficult to integrate. Other differences between online and offline courses are a reflection of the limitations of the online education framework. Student assessment, one of the most prominent examples, is hindered in many cases by the physical and/or temporal separation between teachers and students. As a result, tests that can be automatically processed by computer software have become a standard feature of online courses, as teachers' evaluation of students' performance through observation can become prohibitively difficult due to the medium of course delivery. Thus, the online of online education acts as both an enabling and a limiting force. It is enabling in that it offers new options for educators and limiting in that it removes other options.

Thus, past research into online education has had a strong tendency to focus on these differences, particularly through comparisons of the effectiveness of online and offline education, as measured based on student performance. Many of these comparative studies conclude that online courses are equally effective (or, in some cases, more effective) than their offline counterparts. As a U.S. Department of Education meta-analysis of 51 studies comparing online and offline education concluded, "[s]tudents who took all or part of their class online performed better, on average, than those taking the same course through traditional face-to-face instruction" (Means et al. 2009, p. xiv). The findings also indicated that "[t]he effectiveness

of online learning approaches appears quite broad across different content and learner types" (Means et al. 2009, p. xv). This chapter takes a different approach by focusing not on the effectiveness of online education but on the reasons for its growth and its impacts on existing education models, teachers and students.

13.2.3 Trends in Online Education in Taiwan

The rise of online education is a global phenomenon. Evidence of the increasing interest and involvement in online courses by individuals, institutions, and governments can be seen around the world. Certain countries and regions, however, offer particularly prominent examples of the early and rapid proliferation of online education into all sectors of society. Among these, Taiwan and other countries in East Asia are at the forefront in terms of the number of online students per capita, activity in online courses, individual expenditures on online education, the maturity of the market, and the timeline of government and institutional investment in related technologies and services.

The trends outlined above are evident in many countries throughout the world, and Taiwan is no exception. Both the historical timeline and statistics regarding online education in Taiwan offer clear evidence of its early and whole-hearted adoption of online education within government, educational institutions, business, and broader society.

The origins of online education vis-a-vis distance education in Taiwan began well before the advent of the Internet. Even before the establishment of the Republic of China (ROC) in Taiwan, distance education played a key role in the gathering of nationalist support and development of diplomatic relations. Established in Chongqing in 1940 and reopened in Taipei in 1966, the Chung Hwa Correspondence School, whose educational programs gradually evolved from mail correspondence to radio and television broadcasts to its current online offerings, was a pioneer in distance education and one of the earliest predecessors to today's online courses on the island. The founding of the National Open University in 1986 and Open University of Kaohsiung in 1997 also represented early interest in what would later become online education. Today, these two accredited HEIs have 35,000 and 16,000 students enrolled, respectively.

Following the lifting of martial law in 1987, the 1990s became a period of dramatic educational reforms in Taiwan. Since then, continuous contributions to the development of online education have been made by Taiwanese government institutions, HEIs, businesses, and non-profit organizations. One component of the 1990s educational reforms was the 1994 Distance Education Plan, in which the Ministry of Education (MOE) began its mission to provide universal education through television broadcasts. By 2001, the second phase of the Distance Education Plan had already come into effect, emphasizing asynchronous, web-based instruction. In 2000, EduCities, a nationwide platform for online courses, was launched (DoED 2010). By 2004, it had developed a userbase of 1.5 million people and 1700 schools,

making it "the largest online learning community in the world at that time" (Chan 2010, quoted in Kong et al. 2014, p. 10). In 2005, the MOE initiated a project to establish Digital Opportunity Centers in rural areas. Seven years later, 123 centers had been created and had offered a total of 1915 different courses. In 2008, the Digital Education and e-Learning Project, a collaboration between many different institutions and an expansion of the Taiwan e-Learning and Digital Archives Program founded in 2002, sought to "develop a complete e-learning system for all levels of education, from primary and junior high through senior high school (including vocational school), college and lifelong learning education" (Executive Yuan 2013). With the MOE's e-learning development project set to run from 2014–2017, the Taiwanese government has shown a continuing commitment to promoting online education as an important component of its ongoing educational reforms.

Today, universities throughout the country have engaged to varying degrees in online education, with synchronous and asynchronous for-credit courses among the offerings at many HEIs. Continuing education programs targeting specific demographic groups have also boomed in recent years. While locally developed online courses are widely available in Taiwan, participation in online courses is by no means limited to local providers. According to Coursera, for example, Taiwan is currently the second most active country in the world in terms of video lectures watched and number of users per capita (Coursera 2014).

The effects of the early and continuous institutional push for online education in Taiwan are also reflected in global and local economic indicators. Along with those of Japan and South Korea, the mobile learning market in Taiwan has been considered one of the most mature in the world. The two key implications of the high level of market maturity are that growth has flattened relative to previous years and, despite this, the high levels of revenue derived from online education will remain steady in the coming years. In 2010, Taiwan was the sixth-largest buyer of mobile learning services after the U.S., Japan, South Korea, the UK, and China (Adkins 2011, p. 5). Given that the populations and economies of these other countries dwarf those of Taiwan, such statistics are quite remarkable.

13.2.4 Impacts on Existing Education Models, Teachers, and Students

Past research into online learning has focused primarily on the rate of and reasons for its adoption, student and teacher perceptions of effectiveness, and role in the development plans of educational institutions. Few studies of online education, with the exception of those evaluating its effect on student performance and engagement (e.g., Means et al. 2009), have systematically looked at its impacts on existing education models, teachers, and learners. Although it is clear that online education has an influential role to play in the development of education, the types, direction, and extent of the effects are not well understood.

13.2.4.1 Education Models

As a society of predominantly Chinese descent whose education model has been shaped by Chinese, Japanese, and Western influences, Taiwan represents a unique case study in which to assess the effects of trends in online education. However, few studies to date have sought to do so. Among the impacts that online education has on existing education models, past research suggests that it shapes methods of teaching and assessment, weighs heavily on educational policy and institutional development plans, and reinforces the development and adoption of a global curriculum (Sparapani et al. 2014).

As discussed previously, the emergence of online education as a supplement or alternative to existing education models has shaped the implementation of educational policies. Taiwanese government agencies have been major proponents of online education, and the MOE, in particular, has implemented policies that prioritize its development and affect education at all levels. Given the top-down pressure, either through incentives or requirements, institutions and educators must adapt to the shift towards online by incorporating online courses into their curricula. The institutional restructuring involved in the process of change is gradual but wide-ranging and has both potential benefits and drawbacks. For some, it may offer opportunities to expand course offerings, increase enrollment, reduce costs or increase tuition inflows, improve institutional recognition, or further integrate into national or global educational networks. For others, adaptation may come as a burden, representing new pressure to reform established education models in accordance with external influences, and conformance to new policies or trends may be seen as a distraction and result in incomplete or superficial implementation (Sparapani et al. 2014, pp. 11–12).

13.2.4.2 Teachers

Perceptions of the impacts of online education on teachers are mixed. While online courses have proliferated around the world, the trend has not necessarily been spearheaded by educators themselves. Evidence from some studies suggests that teachers may be more wary of online education than their colleagues in charge of educational administration and policy making. In a survey of over four thousand university faculty and administrators in the U.S., for example, 58 % of faculty reported that they had “more fear than excitement” about the growth of online education. In contrast, over 80 % of administrators responded as having “more excitement than fear” about the issue (Allen and Seaman 2012, p. 5). According to another U.S. study, the reasons for faculty reservations about online education relate to its burden on teachers, the quality of learning outcomes, and the lack of institutional incentives and support (Seaman 2009, p. 3).

In Taiwan, although online education has caught on in many different contexts, the reality on the ground is that the status quo is deeply entrenched in educational culture and teaching methods remain predominantly traditional in nature. As of

2011, use of technology was not a required component of teacher preparation. Relevant training was offered to educators on only a voluntary basis (Sparapani et al. 2014, p. 10). From a teacher's perspective, the inclusion of such training as supplementary gives the impression that online education remains an afterthought and that offline teaching methods should be the centerpiece of education. As is the case in other countries, Taiwanese educators' enthusiasm about the adoption of online education is affected by institutional incentives and support, attitudes towards technology, and the culture within institutions (Wu et al. 2008; Chen and Tseng 2012).

13.2.4.3 Students

Of research addressing the impacts of online education on students, most relate to its effect on student performance, engagement, or satisfaction and tend to find a positive correlation between the variables (Means et al. 2009; Chen et al. 2010; Kuo et al. 2013). Exposure to and use of Internet technology is high in Taiwan, and familiarity among learners may ease the transition between offline and online education models (Chen et al. 2014).

13.3 Methodology

In collaboration with the Election Study Center (ESC), a nationwide survey (n = 397) was conducted in Taiwan in early October 2014. Invitations to participate in the survey were sent to 8700 individuals aged 20–69, and the survey was closed after receiving 400 responses. As the organization responsible for gathering national statistical data on political and social issues since 1989, the ESC has developed a reputation as one of the few research organizations capable of conducting nationwide surveys (Cheng 1996, p. 206). Respondents came from all geographic areas, and the distribution of responses closely reflects the population distribution of the most recent census data. As anticipated, respondents tended to be in the younger age cohorts, reflecting the general distribution of Internet users as well as those enrolled in online courses.

The questionnaire consisted of four parts covering (1) the reasons for the increasing popularity of online courses in Taiwan, (2) the impacts of online education on existing education models, teachers, and students, (3) comparisons between online and offline courses, and (4) demographic data about the respondents' personal experiences with online education. Findings from first part are not included in this chapter due to space constraints. Demographic data about each respondent based on questions not asked in the survey were provided by ESC and matched with survey data for the current study.

In order to ensure data validity and avoid differing interpretations of online courses among respondents, survey respondents were provided with the following definition:

This survey defines an online course as a meeting the following criteria:

1. It is intended for educational purposes by any institution (e.g., public or private, for-profit or non-profit).
2. It is accessed entirely through the Internet, whether on non-mobile and/or mobile devices.
3. It incorporates a system of student assessment or progress tracking, whether formal or informal.

This includes both free and paid courses with synchronous and/or asynchronous teacher-student interaction.

13.4 Results and Discussion

13.4.1 Demographics

Survey respondents (n = 397) tended to be highly educated with 68.8 % reporting an educational achievement of university or above and another 17.9 % having attended technical colleges, implying that the vast majority (86.6 %) had completed some form of higher education. Over two thirds (67.8 %) of respondents were employed in what could be termed as primarily white collar occupations, including as public employees, managers, specialists, or office workers.

In terms of age, the sample consisted only of those aged 20 or above. Of these, around one sixth (17.6 %) were in their 20s and nearly a third (32.2 %) were in their 30s with the number of respondents decreasing with age thereafter, reflecting the tendency for younger age cohorts to be more frequent Internet users. Over half (54.9 %) of respondents were male; 45.1 %, female. While respondents came from all geographic areas in Taiwan, higher numbers (42.6 %) were from the greater Taipei metropolitan area and few (1.8 %) from the mountainous and more sparsely populated east coast.

Over half (54.7 %) of respondents indicated that they had taken an online course before. While this figure is likely inflated by the sample including only those with at least a basic familiarity with Internet technology, it is also tempered by the strict definition of online education given in the questionnaire. Moreover, 6.5 % indicated having worked in the development, design, administration, or promotion of online courses.

The data reveal that respondents with experience taking online courses had used a diversity of different online course providers, including university- or college-run (33.2 %), government-run (35.5 %), private for-profit (50.7 %), and private non-profit (19.4 %). Moreover, respondents had studied a wide range of subjects in

online courses, including professional or technical (42.9 %), academic (53 %), foreign languages (35 %), and other topics (5.5 %).

In terms of completion rates, nearly a quarter (23 %) of respondents indicated that they had completed all of their online courses, while over half (56.2 %) had completed some and 12 % had not completed any of the courses that they had taken. The remainder either planned to complete their current courses (1.8 %) or had taken courses without defined start or end dates (6.9 %). Although over half of total respondents had taken online courses, most among that subset had relatively limited experience, with over half (54.8 %) having taken less than 3 months total of online courses and a quarter (25.3 %) between 3 months and a year. Only 9.2 % indicated 1–3 years of experience, and 10 % had taken them for more than 3 years. A quarter (24.9 %) of respondents had only taken paid courses, and half (49.8), only free. The remaining quarter (25.3 %) had taken both paid and free online courses.

13.4.2 Impacts

The findings of this study indicate that online education in Taiwan is perceived to have a number of impacts on existing education models, teachers, and students. These impacts are both positive and negative in nature, and survey respondents had mixed views regarding the impacts of online education.

13.4.2.1 Education Models

Nearly one third (31 %) of respondents indicated that online education threatened the existing education model in Taiwan. While some suggested that online education had negatively impacted traditional educational practices, others believed that the challenges presented by the proliferation of online courses could be beneficial for the future development of the established education model.

Three-quarters (76 %) of respondents acknowledged that online education had changed teachers' relationships with their students. Forty-two percent believed that online courses provided enough opportunities for teachers to interact with students, and only 24 % saw online courses as giving teachers a more authoritarian role in the classroom. Given that traditional teacher–student relations have been seen as teacher-centered and authoritarian, the finding suggests that the roles in the classroom are shifting due to the influence of online education. Of the 49 respondents providing additional comments to the open-ended question asking for additional impacts on online education, over 30 % mentioned that online courses provided less or no opportunities for teacher–student interaction.

In respondents' comparisons of online and offline courses, 80.4 % indicated that online education was more Western than Chinese; 60.7 %, that it was more active than passive; and 60.4 %, that it emphasized problem-solving over memorization. On the other hand, 72.0 % of respondents expressed the view that online education

was more top-down than offline education while only 47.6 % indicated that it was more teacher-centric. The difference between these two results likely reflects the fact that, in online courses, the teacher, in the traditional sense, may not be present at all. In terms of teaching and learning methods, 60 % of respondents indicated that online courses emphasized test-based assessment over critical thinking, 62 % suggested an emphasis on knowledge acquisition over problem-solving, and only 32 % saw online courses as emphasizing rote memorization. Such findings suggest while some of the basic teaching and learning methods used in online education differ from those of the existing education model in Taiwan, others may be quite similar.

Perceptions that online courses represent a Western education model combined with the notions that local educational offerings are inadequate and that teacher–student relations have been affected by the growth of online education make it clear that online education brings significant challenges to the development of the existing education model in Taiwan. However, findings as to whether these impacts are positive or negative are mixed, and the results of this study reveal that the Taiwanese view online education as simultaneously beneficial and detrimental to the existing education model.

13.4.2.2 Teachers

For teachers, the impacts of the growth of online education have been mixed. Online education was seen by 75 % of respondents to have encouraged the improvement of teaching quality. Having increased the overall availability of courses on any given subject, teachers may feel both pressured to match the quality of existing curricula as well as have greater access to course materials that they can compare with or build off of. Moreover, nearly two-thirds (62 %) believed that online courses had lessened the overall burden for teachers. Again, the availability of reference materials for course design and the ease of internet-enabled course facilitation are likely contributing factors. On the other hand, 42 % indicated that teachers' job security was threatened by the rise of online education. As noted above, teachers' roles in the classroom and relationships with students had also been affected by the proliferation of online education.

13.4.2.3 Students

In contrast to the mixed impacts on teachers, the results of the study indicate that the rise of online education has been primarily positive for students. Over three-quarters of respondents viewed online courses as encouraging students to become independent learners. Moreover, 62 % saw them as providing more opportunities to be critical of teachers than in the existing education model. Only a minority (22 %) of respondents perceived online courses as discouraging creativity, and 31 % indicated that online courses discouraged asking questions.

Table 13.1 Survey responses as percentages related to the impacts of online education in Taiwan

	Strongly disagree	Disagree	Agree	Strongly agree
Threatens existing education model	7.6	61.5	25.9	5.0
Emphasizes test-based assessment over critical thinking	1.8	38.5	54.9	4.8
Emphasizes rote memorization	3.0	65.5	29.7	1.8
Emphasizes knowledge acquisition over problem-solving	2.5	35.5	57.9	4.0
Will eventually replace learning in classrooms	22.4	63.7	11.1	2.8
Lessens burden on teachers	1.8	36.3	56.7	5.3
Threatens teachers' job security	4.8	53.9	34.8	6.5
Encourages teachers to improve teaching	1.8	23.2	65.0	10.1
Gives teachers enough opportunities to interact with students	5.0	52.6	37.0	5.3
Gives teachers' more authoritarian roles	8.1	68.0	22.7	1.3
Changed teachers' relationship with students	1.0	23.4	68.8	6.8
Changed students' relationship with teachers	0.5	23.7	68.0	7.8
Discourages students from asking questions	6.3	63.0	27.2	3.5
Discourages student creativity	8.3	69.0	20.4	2.3
Give students more opportunities to be critical of teachers	2.8	35.3	56.2	5.8
Empowers students to become independent learners	3.0	19.1	61.0	16.9

Among the respondents offering additional comments, it was also suggested that online education supplemented the breadth, depth, or richness of educational opportunities. This confirms the view that existing educational offerings near respondents' places of residence or in Taiwan as a whole lack sufficient diversity and that online courses are a viable supplement for students seeking to go beyond the limited options provided locally. As for the detrimental aspects of online education, respondents expressed in open responses that it offered fewer opportunities for face-to-face interaction with peers and teachers than the existing education model. Assessment problems and student apathy were also mentioned by a small number of respondents.

Table 13.1 shows percentages indicating the levels of agreement and disagreement of survey respondents regarding the impacts online education in Taiwan. In Table 13.2, the means and standard deviations of the responses for each indicator are shown in descending order.

The basic conclusion that can be drawn from these findings is that, while the existing education model has indeed been challenged by the growth of online education, perceptions of its influence are mixed. Online education has been regarded as having both positive and negative impacts on the existing education model. Moreover, the impacts of online education on teachers and students have also been

Table 13.2 Means and standard deviations of level of agreement or disagreement with the stated impacts of online education, sorted in descending order

	Mean	SD
Empowers students to become independent learners	2.92	0.69
Encourages teachers to improve teaching	2.83	0.61
Changed students' relationship with teachers	2.83	0.55
Changed teachers' relationship with students	2.81	0.56
Lessens burden on teachers	2.65	0.61
Give students more opportunities to be critical of teachers	2.65	0.63
Emphasizes test-based assessment over critical thinking	2.63	0.61
Emphasizes knowledge acquisition over problem-solving	2.63	0.60
Threatens teachers' job security	2.43	0.69
Gives teachers enough opportunities to interact with students	2.43	0.67
Emphasizes rote memorization	2.30	0.55
Threatens existing education model	2.28	0.68
Discourages students from asking questions	2.28	0.63
Gives teachers' more authoritarian roles	2.17	0.57
Discourages student creativity	2.17	0.59
Will eventually replace learning in classrooms	1.94	0.67

Responses: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree

both positive and negative. For teachers, it has encouraged the improvement of teaching quality while lessening their overall burden. At the same time, the impacts of online education on teachers' job security and relationships with students remain unclear. For students, online education has been mostly beneficial. It has encouraged them to become more independent learners than in the existing education model and offered more opportunities for students to be critical of teachers. Moreover, only a minority of respondents saw online courses as detrimental for students with the majority disagreeing that they discouraged creativity or the asking of questions.

13.5 Limitations and Implications for Future Research

As mentioned previously, the results of this study are based on a nationwide survey conducted in Taiwan. While the sample reflects people of diverse age groups and living in diverse geographic regions, the results may be biased because the questionnaire was distributed online. However, given that online education is the primary focus of the study, using such a sample does not meaningfully detract from the results.

Although Taiwanese population is predominantly of Chinese descent, its unique history implies that its education model can only be understood as a hybrid of different education models, including traditional Chinese and Confucian, imperial Japanese, native Taiwanese, and U.S.-influenced education models. Thus, while the results to some extent describe the impacts of online education on Chinese education models, readers should exercise caution when generalizing these results outside of the Taiwanese context.

Due to space constraints, the statistical analyses in the study have not made comparisons between groups. Future research could focus specifically on the similarities and differences in the results between, for example, those who have and have not taken online courses, those who have and have not worked in the development, design, administration, or promotion of online courses, or those who had taken online courses of different types or for different reasons. Moreover, future studies could analyze similar issues in other countries or communities of predominantly Chinese descent to reveal underlying issues that are shared across cultures and may be generalizable to sufficiently represent the impacts of online education on Chinese education models and societies.

13.6 Summary

Using data from a nationwide survey conducted in Taiwan, this chapter has attempted to shed light on some of the impacts of online education on the existing education model, teachers, and students that may be specific to societies of Chinese descent. The findings reveal that online education has had major impacts and that the nature of these impacts has been both positive and negative. Although only a third of respondents thought that online education "threatened" the existing education model, most expressed that it redefined the relationships between students and teachers. Moreover, online education was seen as being more Western, active, top-down, and focused on knowledge acquisition than offline education, though there was disagreement as to whether it was more or less teacher-centric. This suggests that while certain aspects of online education are quite similar to the existing Taiwanese education model, others represent a significant departure from the approaches to teaching and learning that locals have come to expect. Perceptions of the impacts of online education on teachers were mixed with most indicating that it encouraged the improvement of teaching quality and lessened the overall burden for teachers. For students, the impacts were seen to be mostly positive. Most respondents believed that online education encouraged students to become independent learners and provided more opportunities for them to be critical of teachers than in the existing education model. They also disagreed that online education discouraged creativity or asking questions. Additionally, the findings indicated that online education supplemented the breadth, depth, and richness of educational opportunities, suggesting that some respondents viewed local educational opportunities as inadequate. Detrimental aspects of online education for students that were

mentioned included decreased opportunities for face-to-face interaction with peers and teachers and—to a far lesser extent—assessment problems and student apathy.

In sum, the results of this study revealed that online education has had significant impacts on the existing Taiwanese education model, teachers, and students, and these impacts have been both positive and negative. Although the results of the nationwide survey in Taiwan are not necessarily representative of the role of online education in other countries or communities with populations of predominantly Chinese descent, the findings provide clear evidence of the impacts of online education in Taiwan and a solid foundation for future research on the relationship between online and offline education models in East Asia and beyond.

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Chapter 14
A Chinese Model of Education in New Zealand

Ai-Hsin Ho and Yu Wang

Abstract With a growing number of migrants who are of Chinese ethnicity in New Zealand, there have been demands from the wider Chinese community for increased educational opportunities that allow students to succeed in the mainstream New Zealand education system. Drawing upon literature and studies on community schools and interviews of migrants in Auckland, this chapter aims to define what a Chinese education model might be and the notion of success in the New Zealand context. Beurdieu's notions of 'capital' and 'field', Lave and Wenger's notion of 'legitimate peripheral participation' all aide to the analysis of the interview findings.

14.1 Introduction

International mobility of people has been a distinctive feature of globalisation. The term globalisation refers to economic, technological, socio-cultural and political change processes which enhance interconnectedness and interdependency of regions, countries, societies, communities, organisations and people (Martin 2008). The high level of mobility of Chinese immigrant families and international students has become a global phenomenon in the twenty-first century. As one of the major immigration and overseas education destinations among the many English-speaking counties such as the United States, Canada and Australia, New Zealand has experienced rapid growth of Chinese immigrants and international students over the past two decades.

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14.2 Chinese Students in New Zealand

Chinese students in New Zealand can be characterised into two major groups. The first group of Chinese students are children of first-generation immigrants from mainland China, Hong Kong, Macau and Taiwan who have been granted residency or citizenship. They comprise the majority of Chinese students in New Zealand. They are part of the 'new wave' of Asian immigrants. According to Eyou et al. (2000) the 'new wave' can be traced back to the implementation of the 1987 Business Immigration Policy and the 1991 point system to attract skilled immigrants and investments, irrespective of race and country of origin. According to the 2013 New Zealand Census (Statistics 2013), Chinese was the fastest growing ethnic group in New Zealand with 16 % growth to 171,000 people. Among the 171,000 people, 18.3 % (about 31,300) were students who were under 15 years of age and identifying with the Chinese ethnic group.

The second group falls into the category of export education and comprises Chinese foreign fee paying students. According to Education New Zealand (2014), China has become one of the major sources of international students to New Zealand with 26.5 % of the overall international student population. The total number of Chinese international students in New Zealand, including primary, secondary, and tertiary education sectors, increased from 24,902 in 2012 to 25,343 in 2013. The majority of Chinese international students, about 84.2 %, were in the tertiary category whereas 4010 students were in primary and secondary schools.

The first group of Chinese students who are residents or citizens outnumbers the second group of foreign fee-paying students. For the purpose of this book chapter, the first notion of 'Chinese students' is used, which refers to Chinese students who are either citizens or residents of New Zealand, living with their family members or relatives, attending schools in New Zealand. Therefore, international foreign fee-paying students are not the centre of focus in this chapter.

14.3 Chinese Models of Education

To portray a possible Chinese model of education in the context of New Zealand, it is of importance to identify what it means by Chinese models of education. According to the literature, Chinese models of education are complex as they root in diverse socio-cultural and economic backgrounds across different Chinese societies and countries where Chinese migrant families reside. The term Chinese models of education can be categorised into two major categories. The first category refers to education models in modern Chinese societies and history, including China, Taiwan, Hong Kong, Singapore and Malaysia (Chen 2014; Mok and Welch 2003). For example, in China, the Chinese education model during the Cultural Revolution, from 1966 to 1976, was characterised by its revolutionary features; after the Cultural Revolution, Chinese education has shifted from the revolutionary

model towards a focus on academic achievements (Chen 2014). The second category refers to Chinese models of education which ethnic Chinese students and migrants carry out in overseas countries (Akorrie et al. 2011; Chen 2014; Chua 2011; Chou and Ching 2015; Gu and Schweisfurth 2006; Sriprakash et al. 2015). For example, in the book Battle Hymn of the Tiger Mother, a second-generation Chinese-American author Chua (2011) used the term 'tiger mother' to identify her 'tiger' style of parenting with a focus on academic success, inherited from Chua's upbringing and cultural background. However, authors such as Lichtman (2011) and Guo (2013) argued that 'tiger mother' is one of the models of Chinese education and that there are other models of Chinese education which co-exist in Chinese migrant families across different contexts. In New Zealand, Akorrie et al. (2011) used the case study of a Chinese community school in Hamilton to explore the risks and issues of running a community school. They argued that the main reason for parents to send their children to the community school was for pursuing academic success rather than learning Chinese culture. In Australia, Sriprakash et al. (2015) explored the parenting practice of a group of Chinese migrant parents in Sydney, and identified the impact of parenting and private tutoring on the educational advantages of their children, and the tensions which emerge as a consequence of securing such advantages. The New Zealand and Australian studies both identified Chinese community schools or private tutoring as an addition to the mainstream education and as a way to enhance ethnic Chinese immigrant children's academic achievements. For the purpose of this chapter, the term Chinese model refers to the second category of the literature which focuses on Chinese migrants' parenting and their choice of education for their children.

14.4 The Power of Chinese Parents and Community-Based Education

According to Kavan and Wilkinson (2003), Chinese parents made decisions for their children to receive education in New Zealand with the hope that they will become 'dragons' in the future. The notion of 'dragon' encompasses "the high status, good job and powerful position sought by Chinese parents for their one child" (Kavan and Wilkinson 2003, para 2). Hence, Chinese parents exercise the power of choice for their children's education across national and systematic boundaries with the assumption that New Zealand education can aide to their goals. At the tertiary education level, Peng (2014) further acknowledged that Chinese parents play a significant role in the selection of subjects for their children. On top of normal schooling, Chinese parents' act of education choice is also carried out in the form of community-based education (Akorrie et al. 2011). Chinese parents send their children, ranging from pre-school to secondary school age, to community schools on the weekend or after school to develop their knowledge of Chinese language and their appreciation of Chinese culture through extra-curricular activities. Chinese

community schools have experienced tremendous changes over the last two decades in aspects such as numbers of providers, origins of organisers, and types of organisations. According to Yeh (2001), in 2000, there were about 15 Chinese community schools in greater Auckland region, among which 12 were founded by migrants from Taiwan (two of them had stopped recruiting students in 2000) and three were founded by migrants from mainland China.

Chinese students in New Zealand have experienced significant growth and hence presented challenges to New Zealand education sectors. For example, Eyou et al. (2000) were concerned about cultural identity and psychological adjustment of adolescent Chinese immigrants in New Zealand. Peng (2014) further acknowledged the phenomenon of Chinese students developing competencies in order to meet the expectations of New Zealand education, for example multicultural personalities, social networks, English language ability, communication skills, and New Zealand ways of studying. As New Zealand education institutions have become more culturally diverse, it is therefore paramount for this chapter to explore two questions:

- What does a Chinese model of education look like in the context of New Zealand?
- How does a Chinese model of education impact on the learning of Chinese students and hence their success in New Zealand school settings?

14.5 Community Schools and Their Transformations

As in 2014, there were about at least 30 Chinese community schools in greater Auckland. At least 15 of these were established in the late 1990s–2000s when skilled migrants from Mainland China became the new significant demographic group of Chinese immigrants. This indicates that the number of community schools in Auckland has been at least doubled since 2000 because of the "new wave" of Chinese immigrants. In particular, the number of community schools founded by Chinese people from mainland China in greater Auckland area has been increased dramatically or even become dominant. Community schools serve the purpose of addressing community needs and providing education opportunities for community members outside schools hours.

In terms of types of community schools in New Zealand, before the "new wave", 7 out of 19 community schools were mainly affiliated with religious groups, such as Buddhism and Christian. The second largest group were individual founders (5 out of 19). The rest three types are: 1) associated with community societies (2 out of 19), 2) founded by parents (2 out of 19), 3) founded by professionals (3 out of 19) (Yeh 2001, P237). "New Wave" has reshaped this category. Now there are more community schools founded by individuals and community societies than religious groups, and a new type of community school has even emerged. This new type of community school is normally driven by parents' needs, established by proactive

parents and appropriate facilitators, and supported by schools as a part of their after school programmes. Within the 30 community schools, there are about five programmes employing this model. This type of Chinese programme has the advantage of obtaining support from mainstream schools. Parents and facilitators normally use school facilities, such as classrooms, printers, newsletters and school websites to deliver courses, prepare materials, and post messages and notices. Although the number of students who enrolled in this type of programme is not as high as community schools, it is a very stable source of extra-curricular Chinese programme.

The "new wave" of Chinese migrants has impacted on the increasing number of students who learn Chinese in community schools. For example, Yeh (2001) noted that, in 2000, there were about 1712 students learning Chinese in the 13 community schools or classes in the greater Auckland region. In terms of students roll, Chinese New Settlers Service Trust, established in 1998, became the largest community school in Auckland, as well as in New Zealand, with 1700 stable student roll in recent years. West Auckland Afterschool Education Centre, established in 1996, became the second largest community school in Auckland with 700 student roll in total. The Chinese School associated with Auckland Chinese Community Centre Inc. shared the longest history in Auckland. The Chinese School was established in 1960s with a Cantonese background and now provides both Chinese Mandarin and Cantonese courses for the second, third and fourth generations of its members. There were also smaller community schools across the greater Auckland region such as Browns Bay Chinese Community School, New Market Afterschool Chinese programme, and Wakaaranga Afterschool Chinese programme.

Courses provided in community schools reflect various needs of Chinese community members. The courses that the community schools provided ranged from Chinese language, academic programmes to China-focused extra-curricular programmes. Apart from Chinese language courses, most community schools in this research also offered mathematics, English reading and writing, and Chinese culture programmes, such as calligraphy, brush painting, fine arts, martial arts and dance. For example, the Chinese New Settlers Service Trust, which is the largest community school in Auckland, provided the following programmes:

- Fine arts (children water colouring)
- Fine arts (pencil sketching and cartoon drawing)
- English reading and writing
- Children dance
- International chess
- Martial arts
- Computing
- Mathematics for Year 7–Year 12
- Chinese for non-native speakers
- Cambridge mathematics
- Tuition for mathematics contests

14.6 Theoretical Underpinnings

Schools can be perceived as a field of practice (Bourdieu 1985). Schools in different societies, such as in China and New Zealand, maintain particular philosophies, logic, and activities to reproduce and strengthen the structure of the field. Bourdieu identified them as capital. Economic, social, and cultural forms of capital embody interests and function, and can be accumulated, devoted and exchanged to maintain group distinction and dominance within social structures (Bourdieu 1984, 1996). Chinese students who are learning in the context of New Zealand essentially engage in practice such as bringing their cultural identity, knowledge, expertise, skills and social networks to New Zealand schools as well as using English language as a medium to participate in the field of New Zealand schools. Different forms of capital are exchanged and acquired to meet individual students' developmental needs. As this chapter focuses on Chinese students who are migrants or citizens, economic capital plays a less significant role in school settings as their tuition fees are the same as other local students. On the other hand, cultural capital and social capital play a paramount role when Chinese students try to enhance their performance and recognition by members of the mainstream New Zealand schools. However, the principles that guide the field of practice in Chinese and New Zealand school systems are fundamentally different.

In China, Confucius philosophy and 'Gaokao' are dominant in shaping the curriculum in China. Gaokao is the national university entrance exam in China. In June 2014, 9.39 million students across different provinces took part in the 2-day Gaokao. Gaokao is characterised by its high stakes nature as it determines which tertiary education institute the student can attend based on the exam results. In New Zealand, the New Zealand Curriculum (Ministry of Education 2007) (the Curriculum) and National Certificates of Education Achievement (NCEA) guide the practice of New Zealand schools. The Curriculum (2007) identifies five key competencies, including (1) thinking, (2) using language, symbols, and texts, (3) managing self, (4) relating to others, and (5) participating and contributing. The Curriculum also specifies eight learning areas. They are English, the arts, health and physical education, learning languages, mathematics and statistics, science, social sciences, and technology. NCEA is New Zealand's university entrance exam system that allows students to sit internal exams during the year and external exams at the end of the year. Senior secondary students will be granted a certain number of credits when they pass a particular exam. Once they collected certain amount of credits, they will be granted levels one to three national qualifications. Students then use the credits to apply for universities in New Zealand.

In order to be successful in New Zealand schools, Chinese students need to learn the Curriculum and follow the rules that guide the practice of New Zealand schools. According to Bourdieu's (1985) theory of practice, the rules of practice are the implicit, taken-for-granted, and contextualised regular principles that guide every member's practice. The metaphor 'rules of the game' helps to portray the inherent artefacts, symbols and properties that guide the practice of the players in the game (Bourdieu 1992, 2000). Players may shape their understandings and interpretation

of game rules, and strategically search for the fit between the game and their future actions. The artefacts and symbols that are highly recognised in a field can be perceived as carriers of power that define the types of resources and skills that students can access and maintain.

Individual Chinese students in New Zealand therefore carries their unique social and cultural capitals which they obtain from their families, social networks, communities, societies and national education systems in both China and New Zealand. As discussed previously, Chinese parents in New Zealand would endeavor to provide necessary resources for children to develop capital and gain familiarity with the rules of the game in order to succeed in the New Zealand education system. Drawing upon the notions of communities of practice, Lave and Wenger (1991, 1999) proposed the metaphor of 'legitimate peripheral participation' to explain the process that new comers employed to learn from the experienced, and to achieve full participation in the community. The process of legitimate peripheral participation involves less experienced members developing identities, mastering competencies, understanding institutional habitus, accumulating experiences, and gradually moving towards full participation in the new community of practice. Not only is learning important, but also control, selection and the need for access to resources are critical elements in communities of practice (Lave and Wenger 1991, 1999). Following the logic of legitimate peripheral participation, Chinese students who are unfamiliar with the mainstream school environment and the usual practice in New Zealand mainstream schools are urged to learn and develop new knowledge, competencies, experiences, and identities in order to overcome barriers and be recognised as members of the school.

14.7 Case Studies

Based on the theoretical underpinnings, this chapter aims to explore two research questions:

- What does a Chinese model of education look like in the context of New Zealand?
- How does a Chinese model of education impact on the learning of Chinese students and hence their success in New Zealand school settings?

A qualitative research was carried out to explore a Chinese model of education in the context of New Zealand and how it has impacted on the learning and success of Chinese students. Convenience sampling was used to choose participants who took part in semi-structured interviews. Thirteen interviews were conducted. Among the 13 interviewees, there were six directors or coordinators of Chinese community schools, six parents, and one teacher. Four out of the six directors or coordinators also carried the role of Chinese teacher at their own community schools. Their children also studied at the community school at the time of the interview. All of these interviews used a set of prepared questions, which indicate the purpose, and challenge of study Chinese language and culture and extra curriculum courses.

14.8 Findings

The interview findings suggested that, not only adapting to the New Zealand mainstream school environment was paramount, Chinese students also needed to maintain their identities, their mother tongue and Chinese culture to maintain cultural connections with their parents and extended families. This type of education is mainly accomplished through community education, especially community schools. According to the interviews, community schools served the purpose of maintaining both the Chinese students' cultural identity and building up their academic competencies to aide their success in the mainstream New Zealand school system. Similar research findings also occur in the American counterpart. According to Lu (2001), Chinese community schools in Chicago, the United States, offered similar courses on Chinese culture, material arts, dance, maths, English, arts and computer skills. These courses are similar to the ones in Chinese community schools in NZ. Those programmes also helped to maintain the cultural identities of the Chinese migrants.

14.8.1 A Chinese Model of Education Incorporating Chinese Language Programmes

Promoting Chinese language plays a key role in Chinese community schools in New Zealand. Chinese language programmes were offered in all Chinese community schools and afterschool Chinese classes affiliated with mainstream schools. The importance of learning Chinese to enhance cultural identities and create opportunities is stressed by the research participants.

Based on the interviews, children were pushed by their parents to start learning Chinese as early as possible. Community school rolls showed that the majority of children started learning Chinese at the age of five which is about the same time when they attend the first year of primary school. Some students even started earlier. According to the parents in this research, maintaining Chinese identity is the main reason for learning Chinese. Four parents offered views on the importance for their children to maintain their mother tongue, especially the ability to speak, read and write in Chinese, and use Chinese to communicate with parents. Their responses revealed Chinese parents' high expectations on their children in the development of social and cultural capitals such as language and identity.

One afterschool programme director and teacher commented that 95 % of Chinese parents regarded keeping their mother tongue as very important, and that only 1–2 % of Chinese parents think English ability is more important than Chinese ability. Another Chinese programme director indicated that highly educated Chinese parents tend to have an awareness of keeping their mother tongue in New Zealand. The following is the quote about her perceptions of maintaining Chinese language:

> It is very common that when, the first generation of new immigrants bring their China-born first child to New Zealand, they often emphasise too much on English ability and did not

> pay attention to maintaining children's Chinese ability. When their children grow up, parents who did not insist on using and learning Chinese language would experience the difficulty of maintaining their children's Chinese language ability. Chinese parents regret what their first child's lost, so they push very hard the second child (normally New Zealand born) to study Chinese.

Two research participants also experienced dilemma over the degree should their children learn Chinese while living in New Zealand where English language is dominant. As Haste (2001) argued, symbolic tools such as language and text may facilitate as well as constrain human actions. However, the research findings suggested that children are more likely to obtain more opportunities than constraints if parents insisted on developing both Chinese and English language abilities of their children.

Enhancing language ability to aide future opportunities is another consideration of learning Chinese. China is playing a significant role in the world economy. Learning Chinese has become increasingly popular worldwide. Four Chinese parents in this research indicated that enhancing their children's strengths in languages, including Chinese, might in the long term provide them with more opportunities such as university entry, scholarships and work opportunities. For example, they can take part in exchange programmes in China or have more career opportunities in the future. Six parents agreed that their children should start learning Chinese as early as possible.

According to McLaughlin (2012), children are more likely to listen to parents' opinions when they are young and they would not find it too hard to learn a language during childhood. In this research, the school roll of the community schools also reflected that there were more pre-school and primary students than secondary students. The interview findings also suggested that these Chinese students chose to stop studying Chinese after Year 8 because (1) they have limited options in the secondary curriculum; (2) they and their parents think that their Chinese language ability is enough for the purpose of daily communication; (3) there is no need to continue the learning of Chinese language unless they have special interests or they do not obtain enough NCEA credits through other subjects.

Learning Chinese in an English speaking environment is not easy. The research participants revealed that teachers, school directors and parents complaint about students' lack of motivation and the unsustainability of learning outcomes. It is note-worthy that the proportion of Chinese students learning Chinese is very small. According to the 2013 New Zealand Census, there are about 112,290 Chinese people live in greater Auckland area. Providing that student proportion is 18.3 %, there are about 20,549 students under 15 year of age live in Auckland. However the number of students learning Chinese through community schools and afterschool programs in Auckland is no more than 4000. Therefore, one of the community school directors was concerned that new immigrants' children would lose their mother tongue if their parents did not insist on sending them to community schools nor teach them Chinese at home. This inevitable reality had not only happened to Chinese migrants but also other ethnic groups.

14.9 A Chinese Model of Education Strengthens Academic Performance and Success

Developing social and cultural capitals in order to compete with other New Zealand students or succeed in New Zealand schools is another consideration for attending community schools. In terms of strengthening academic performance, English and mathematics courses are provided by the community schools that are involved in this research. English courses aim to cater for the needs of migrants, for example developing their English reading and writing competency to settle in New Zealand and succeed in New Zealand schools. The community schools in this research only offered English courses to new migrants to meet their survival needs. Once children have improved on their English ability at the mainstream school, parents would stop sending their children to the English class at the community school.

Sending children to community schools to learn mathematics reflects Chinese parents' concerns about the differences of mathematics education in China and New Zealand. Primary schools in China employ subject-based curriculum which means every subject is taught in an intensive content. The findings showed that mathematics was perceived by the Chinese participants in this research as loosely taught and not having specific requirements till Year 3 even the national standard applies. These Chinese parents therefore were concerned that their children would not have the same mathematics ability as their counter parts in China or that their children would miss the opportunity to attain mathematics ability for academic success. To meet Chinese parents' expectations, Chinese community schools adopted mathematics curriculum and internationally recognised exams from other countries. For example, some used mathematics curriculum from Australia where schooling starts from 6 year-old and mathematics is more intensive than that in New Zealand. Some offered Cambridge and Olympic mathematics to advance Chinese students' learning in mathematics.

Cambridge mathematics is part of Cambridge International Examinations (Cambridge International 2015), a world class international curriculum (5–19 ages) and qualifications (14–19 ages) provided by University of Cambridge. According to Education Review (Education 2013), apart from NZ National Certificate of Educational Achievement (NCEA), some NZ schools employ international curricula and qualifications such as Cambridge (58 schools) and International Baccalaureate (22 schools). In comparison to NCEA, Cambridge mathematics is recognized by content intensiveness and international recognition. As a result, some NZ schools and Chinese parents value the Cambridge academic pathway. Therefore, some Chinese community schools provided Cambridge mathematics tutorials based on Chinese parents' requests.

Olympic mathematics refers to the International Mathematical Olympiad (IMO), which is World Championship Mathematics Competition for High School students. Some educational tutoring programmes including community schools adapted the Olympiad math programme for younger learners to "train their divergent thinking skill", according to one director of community school. Chinese parents in this

study highly valued this programme in mainland China and this culture had been passed on to the NZ Chinese community.

Four out of the six parents interviewed sent their children to afterschool mathematics courses. Among the children, two were about 5 year-old. One parent regretted that the her son, now 16, was too late to study Olympic mathematics. She also provided an example of her son's friend who attended Princeton University with advanced mathematics ability as a result of learning Olympic mathematics. This comment showed that comparison between Chinese parents appeared to be common in the Chinese community.

According to one community director in this study, Chinese parents tended to make comparison between their own and other children, in areas such as extra-curricular courses, learning results, and relevant skills including arts, music, mathematics and Chinese. The reason behind is that they value their children's academic performance, artistic ability and talents, and are proud of the good performances. So sharing and exchanges of these kinds of information is very common between Chinese parents. The comparison between Chinese parents is another tribute to Chinese education model, which roots in Confucian philosophy and social mobility system, where "education was the route to social status and material success", so that parents have "pressure on children to succeed at school" (Starr 2012, p. 4). However, this tribute did not receive much attention in the research knowledge base. For example, Starr (2012) refers Chinese education model to Confucian pedagogy, teaching practices, learners' role and examination systems rather than Chinese parents' contribution and influences on children's educational choice.

Chinese parents value solid foundation of academic education, particularly English reading, writing and mathematics. A new immigrant Chinese parent, also a lead teacher and director of an afterschool Chinese program thought that the education system in China is too rigorous while the New Zealand counterpart is too loose. Her ideal education model is a balanced model that combines Chinese and New Zealand models of education. She endeavoured to put her ideas into practice by insisting on sending her children to community school after normal school hours. The following timetable reflects her 9 year-old son's intense extra curriculum programme (Table 14.1):

Her 5 year-old girl's timetable is not as busy as her son's. When she was asked whether her son likes this schedule, she replied "…*He has got used to it. He still has plenty time to play. Both my two children grew up in a healthy manner. People think*

Table 14.1 Extra-curricular timetable of a Chinese student

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
After school 3:00–5:30 pm	Mathematics	Chinese	Mathematics	Chinese martial arts	Chinese language	Chinese*2	English writing (private tutoring)
	Piano	Martial arts	Chinese essay writing			Chinese writing, Swimming	Drawing, Church activities

they are brilliant, happy, and they listen to adults." The above teacher's opinions and practice are representative of many of the participants. This interview finding showed that Chinese parents had the tendency of carrying their ideal model of education and trying to make it work to cater for the needs of their children. To provide the ideal model of education to their children, Chinese parents would use their own expertise or rely on community programmes provided by community schools. As discussed earlier in this chapter, Chinese parents sought opportunities to develop their children's culture identity, competencies and skills as part of their social and cultural capitals with the hope that these capitals would enable their children become successful members of the mainstream New Zealand community. Therefore, parents invest time, energy and money in a variety of extra-curricular programmes. Community-based Chinese programmes happen to serve this purpose and meet the expectations of the Chinese parents in this study.

14.10 Conclusion

Chinese parents expect their children to succeed in the context of New Zealand school system. To achieve this goal, they create an ideal 'Chinese model of education in New Zealand' for their children, the combination of community-based education and mainstream New Zealand school education. Such model is facilitated mainly by parents who oversee the potential and benefits for their children to maintain both New Zealand and Chinese identities and develop social and cultural capitals which would enable them become successful members of the New Zealand community in the future.

This implies that Chinese parents play a key role in the provision of community-based education. Chinese parents place enormous emphasis on education and the success of their children. Drawing up Bourdieu's notion of 'fields' and 'capitals' and Lave and Wenger's notion of 'legitimate peripheral participation', this chapter concludes that Chinese parents would provide resources and opportunities after-school or on the weekends in order to assist their children become competent players in the field of New Zealand mainstream schools, and full members of the New Zealand community in the future.

On top of the mainstream New Zealand school education, Chinese model of education in New Zealand is carried out in the form of community-based schools which incorporates a number of key principles to help their children achieve academic success. These principles include, for example, life-long learning for community members, parents' high expectations of developing children's cultural and academic competencies, and awareness of the practice in the mainstream school sector in New Zealand.

The research findings indicated a lack of commitment to further develop Chinese language competency due to the demanding senior school requirements and limited option choice in New Zealand. Chinese students usually drop community-based Chinese language programmes after Year 8. It is also of concern that Chinese par-

ents and students do not consider learning NCEA Chinese as a strategy to maintain their identity and language ability in the context of competitive senior schooling. As 'learning languages' is one of the key curriculum areas in the New Zealand Curriculum, stopping Chinese language learning after Year 8 is in contrast to the expectations of the national curriculum. Hence, there is a demand for the mainstream New Zealand primary and secondary schools to learn from local community schools, rethink the value of learning second languages, and reshape their current practice. Primary schools can start language programmes by providing afterschool courses to help migrants maintain their identity, and develop non-native speakers' interest in learning languages.

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Chapter 15
Shifting Paradigm: Reforming Chinese Language Education in the Philippines

Sining Marcos Kotah

Abstract The quality of Chinese language education in the Philippines underwent a decline after the Filipinization Act of 1976. Chinese schools that catered mostly to teaching children of Chinese who had settled down in the Philippines were forced to teach the language only as an elective, instead of as the core curriculum. Combined with a change in culture and values of Chinese-Filipinos, students' proficiency in the Chinese language eventually deteriorated. Granted the change in the culture of the students, many Chinese educators moved to change the pedagogy of teaching from a first language approach to a second language approach. This paper discusses the background, assumptions, and processes of this educational reform using Philippine Cultural College, the oldest Chinese-Filipino secondary school in the country, as a case study on the implementation and efficacy of this paradigm shift in teaching the Chinese language.

15.1 Brief Background

Chinese language education in the Philippines used to be at par with that in China. Graduates from the local Chinese senior middle schools back in the early 1970s could very well cope with the teaching in China, Taiwan, Hong Kong, or Macau should they decide to continue their tertiary education in those places.

The way Chinese schools in the Philippines were run was changed by the 1973 Filipinization law of the government during martial law. This law demanded "control and administration of all educational institutions . . . be vested in the citizens of the Philippines" (Presidential Decree 176 1973). Schools which used to be under the Taiwanese government had to restructure, and Chinese school directors and administrators had to step down. Philippine Chinese schools, which then patterned their system after the six-year middle and senior high school system in China, had to conform to the Philippine educational standard of four years, Chinese could only be taught as an elective, and the way subjects were taught had to be reformed.

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In all, hours spent for Chinese instruction were cut down from four hours a day to two (Gan and Wang 2008; Sim 2011).

The government then issued Presidential Decree No. 1379 in 1978, which granted naturalization to foreigners. This led to many Chinese acquiring Filipino citizenship, thereby opening up economic opportunities for them. As parents became involved in more and more businesses, it led to changes in family dynamics in Chinese homes, leading to more reliance on hired nannies than ever before. This led to children being less and less exposed to Chinese language and culture as a whole. The integration of Chinese into Filipino society also led to a shift in cultural identity, with more and more Chinese incorporating both a Chinese and Filipino identity into their daily lives. Gone were the notions of living in the Philippines as a sojourn, as they were determined to grow roots in the land they now called "home" (Huang and Wang 1999).

The decreased emphasis in Chinese education, along with the changes in the cultural makeup of the next generation, led to alienation from a Chinese speaking environment (Wang 2003). Because of these changes, the utility of learning Chinese became less and less apparent, leading to its lower priority and its decline (Gan and Wang 2008). In the late 1980s, most high school graduates could not read or even carry conversations in the language (Sim 2011). As this decline in skill in Chinese permeated the family, most students entering school did so without enough proficiency in the language. This contrasted with earlier scenarios, where the emphasis on the Chinese language meant that students at least learned and were trained in the Fujian dialect. Coming into school, they would just have to adjust to learning Mandarin, which is similar in a lot of ways to the Fujian dialect.

Meanwhile, the approach to teaching Chinese has not changed throughout this period of cultural reform (Zhao 1999). Modeled after the educational system in China which taught Chinese as a first language, the system of education still assumed that students had at least a rudimentary grasp in the language, and thus failed to account for the needs of a new generation who were not as familiar with the language. This model of education centered on creating associations, going from words to phrases to sentences. Students were taught to (1) read, by repeating characters and linking them to words they knew; and (2) write, linking words they knew to strokes and lines. This pedagogy is summarized in Fig. 15.1. To a beginning student with previous knowledge of Chinese, this was manageable. To the student with no background on it, however, it became a cycle of echoing and memorizing what the teachers taught (Chen 2000), a difficult process that usually led to fear, alienation, or even hatred of the language. Chinese language education steadily worsened in this time (Wang 2013), and the lack of change in the method of instruction at a time when the demand of it had completely changed was a big part of the problem (Yang 1995).

And so reforms had to be carried out.

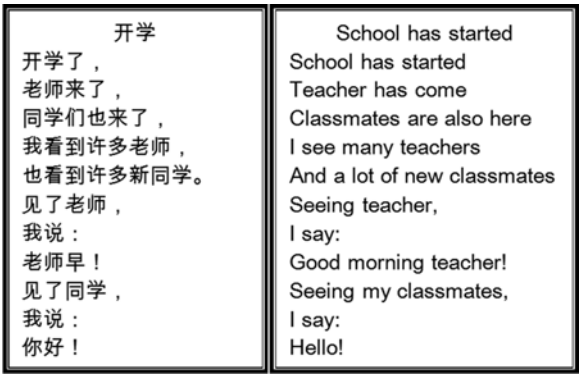
15.2 Shifting Paradigm

The key to the reform was a shift in paradigm in the way the Chinese language was taught. Chinese had to be seen as a second language to the students rather than the first, meaning that the language education had to shift from educating Chinese in the Philippines about their mother tongue to nurturing Filipinos aware of their Chinese culture (Wang 2013).

With the need to modify the model of teaching acknowledged, the precise mechanisms of this change left institutions divided. On the one hand, there were schools which insisted on maintaining the traditional way of first language education. Others believed that a shift to the second language approach would be more suited to the needs of the students. Philippine Cultural College (PCC), where I serve as the Vice President in charge of the basic education department, is one of the forerunners of the approach. Established in 1923, PCC is the first Chinese secondary school in the Philippines. PCC became the home base of a new model of Chinese education, one created by the Philippine Chinese Education Research Center (PCERC), an organization of Chinese language enthusiasts seeking to "save" the quality of Chinese language education in the country. PCC piloted paradigmatic shift to the second language approach, the results of which this paper is based upon.

For the purpose of understanding the discussion that will follow, a review how these two approaches differ from one another is in order.

As mentioned above, the main assumption of the first language model is that the students are at least familiar with the Chinese language, and that this is due to exposure and habitual practice at home. Children are able to converse in their "native tongue," and possess skills to use the language without much effort. Here the approach to teaching focuses on applications of the language. Students taught with this model are introduced to literature aside from the usual furthering of language skills for conversational purposes (Jiao 1995; He 2006; Sim 2011). Learners in this approach are expected to understand words mentioned in class, even partially, and are taught by the institution to read and write as proficiently as they can speak. Learning to speak the language is never the primary goal of this model. The following is a sample text of the first lesson of a first grade textbook demonstrating this approach (Chinese Language Arts 1n. d.):



开学	School has started
开学了，	School has started
老师来了，	Teacher has come
同学们也来了，	Classmates are also here
我看到许多老师，	I see many teachers
也看到许多新同学。	And a lot of new classmates
见了老师，	Seeing teacher,
我说：	I say:
老师早！	Good morning teacher!
见了同学，	Seeing my classmates,
我说：	I say:
你好！	Hello!

Fig. 15.1 Sample text from a first language model textbook (English translation mine)

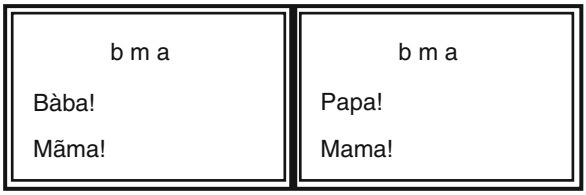


Fig. 15.2 Sample text from a second language model textbook (English translation mine)

This text sampled above contains 21 distinct Chinese characters in eleven lines. Still, only four of these 21 characters were included in the list of vocabulary words after the text, which was meant for students to understand the definition of unfamiliar words. Having only two words (four characters), the editors clearly thought the first graders already knew the rest of the words (characters), such that all they had to do was to associate those vocabulary words with the Chinese characters used in the text. As indicated by the editors in the notes of the book, each lesson came with it three tasks to accomplish: to know the words, to read the words, and to write the words.

In contrast, a second language is one acquired through some kind of schooling after a first language has already been learned. The goal of teaching is to make students possess the skills and competencies of a language foreign to them (He 2006; Jiao 1995; Sim 2011). It is assumed that the student has no prior knowledge of the language, and cannot speak nor read in the language. Thus, the model emphasizes teaching students the language alone, with teachers having to teach the children how to speak the language starting from its phonetic alphabets (*pinyin*), from simple to complex, in a systematic manner. Through exposure over time, students gradually manage to acquire proficiency over the sounds, the meaning of the words, and then, eventually, grammar. The following is an excerpt from the first lesson of a first grade textbook using the second language model (Philippine Chinese Reader, Book 1 n.d.) (Fig. 15.2).

The lesson focuses on the phonetics and pronunciation of the word. As much as students may be taught the semantic meaning of a word, the primary goal is for them to learn to articulate the sounds of the language. In contrast to the first language approach, this one emphasizes listening and speaking before reading and writing. A simplified framework for each of these two models are shown in Figs. 15.3 and 15.4 below.

What is the more effective model will depend on the learners it caters to. Aside from migrant students from China, Hong Kong, or Macau, students are predominantly those born and raised in the Philippines. As previously mentioned, these students are more exposed to a culture more Filipino than Chinese and start to take up a Filipino identity (He 2005). With their full integration to Philippine society, the Chinese language and culture has become more and more foreign to them. Thus it seems like a shift to a second language model would improve the ability of schools to educate these "new generation" students. The feasibility of such a language education model was pilot-tested in PCC. The implementation and findings of this pilot test are the focus of the rest of the chapter.

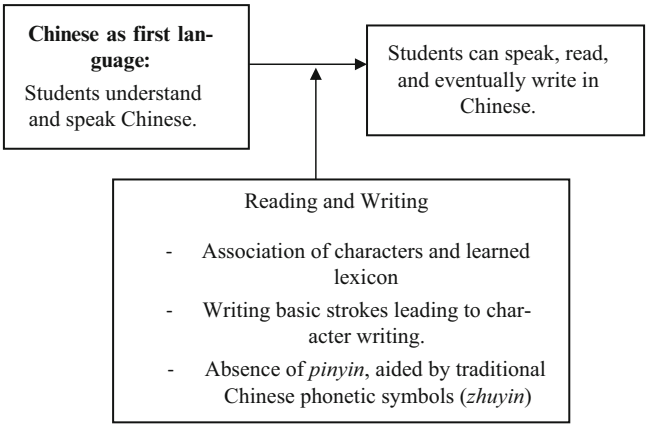


Fig. 15.3 The first language model of Chinese language education

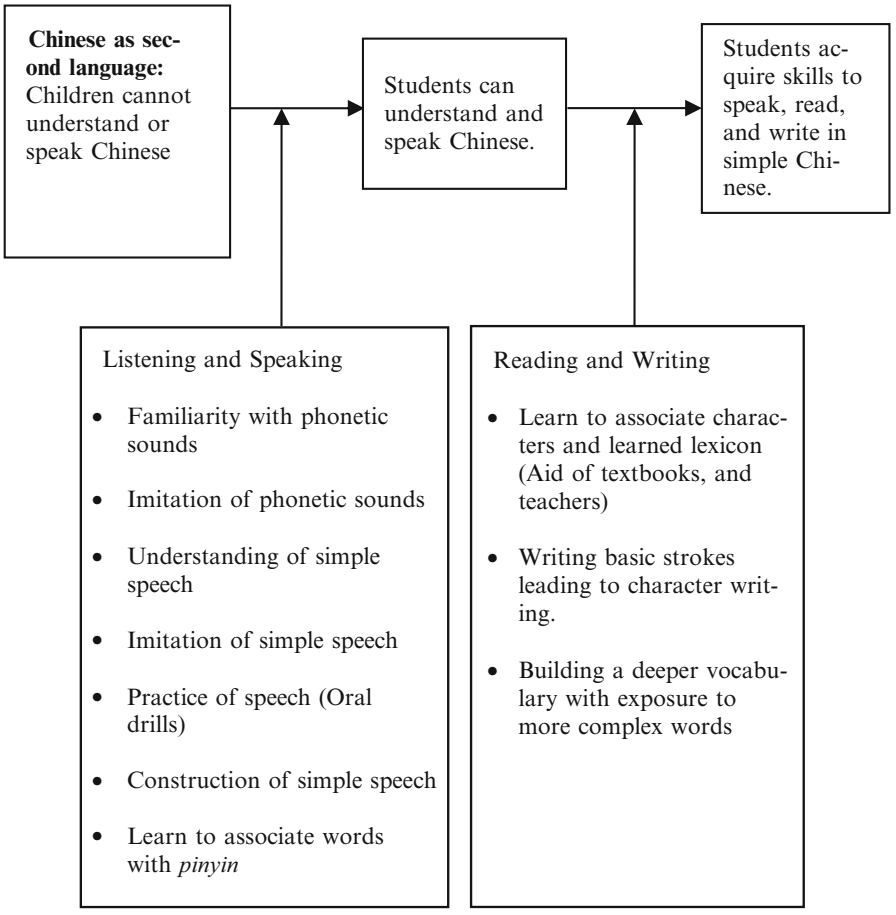


Fig. 15.4 The second language model of Chinese language education

15.3 Implementing the New Model

The efforts to revise the model was aided by Professor Lu Bisong, an authority in teaching Chinese as a second language from the Beijing Language and Culture University, who worked with the PCERC to conduct lectures to Chinese language educators in the Philippines in the early 1990s.

The shift to a second language model culminated in a new set of textbooks developed by the PCERC, "Philippine Chinese Reader", and these books were the main bases of Chinese education during the pilot testing. Aside from emphasizing skills of listening and speaking, the text in the books also contextualized dialogue to the Philippine setting, making it more understandable and relatable for the students. They utilized Filipino names for characters, set stories in actual places in the Philippines, and referred to events that transpired in the country, effectively becoming guides to speaking Chinese in the country.

Aside from the books, points of emphases in the teacher's pedagogies were also shifted. There are three main goals of this model, created by PCC after the model introduced by Professor Lu:

1. The first is to shift the role of the teacher from instructor to guide. Students are made to become active learners of the language, and the teachers become more responsible for the facilitation of the learning process. This contrasts with previous styles of rote memorization of students of information piled upon them by their teachers. This new role of teachers is achieved by emphasizing the importance of oral drills to develop students' proficiency of the language. Students are asked in class to read, pronounce, and practice various sentence patterns routinely. The teachers explain core concepts that students learn through guided practice. The drills take precedence over regular textbook reading, with students encouraged to come up with their own answers to questions rather than read them from the book.
2. Teachers are also tasked to use a variety of teaching methods and techniques to practice different skills in the students. These methods include asking questions about the text for students to answer, narrations of stories by teachers, putting students in various imaginary situations, role-play conversations, among others. Teachers are prepared for these through training sessions, through their peers in demonstration classes, classroom observations, and supervisor evaluations.
3. Finally, teachers are also asked to make use of multimedia presentations, including visual materials, flash cards, audio recordings, video files, as well as computer applications to improve the quality of classroom learning, These and other techniques help make the content more lively and engaging for the students.

Together, the new textbooks and approaches to teaching have been in use in PCC since 1994. The shift was previously documented by Kotah et al. (2008), who published a progress report reflecting the preliminary results of 10 years of implementation of the model.

15.4 Results

Since its first use, the new model of teaching has improved the skills and competencies of PCC students. Reading and writing followed as learners acquired better competencies in the language. The quality of teaching the Chinese language has also steadily improved for the past years, as measured by the amount of students receiving failing grades in their Chinese subjects. Below are some numbers on students with failing grades (Table 15.1).

Before the series of "Philippine Chinese Reader", which used second language approach, was pioneered in PCC, 133 out of 653 grade school pupils (20.4 %) received failing marks in the Chinese curriculum. After the said series of textbook was used for one year, the number of students receiving failing marks was reduced to only 94 out of 641 grade school pupils (14.7 %). The latest figures in PCC now show only 18 out of 733 grade school pupils (2.5 %) who failed in the Chinese subject. This is 17.9 % decrease from the figure when traditional way of teaching Chinese was still being used (Table 15.2).

The same trend is evident in the high school department. When PCC was still using the first language approach textbooks, 77 out of 498 high school students (15.5 %) received failing marks. After the series of "Philippine Chinese Reader" was used for 1 year, only 41 out of 500 high school students (8.2 %) failed. The latest figures in PCC now show only 13 out of 392 high school students (3.3 %) failed in Chinese language. This is a 12.2 % decrease from the figure when the first language approach dominated the Chinese language teaching in the country.

The figures above give support for the viability and effectiveness of the second language model of Chinese education, along with the importance of second language textbooks in the implementation of such a model.

Table 15.1 Grade school level grades (Philippine Cultural College 1994, 1995, 2013a)

Grade level (Grade school)	School year 1993–1994			School year 1994–1995			School year 2012–2013		
	No. of pupils	No. of pupils who failed in Chinese	(%)	No. of pupils	No. of pupils who failed in Chinese	(%)	No. of pupils	No. of pupils who failed in Chinese	(%)
Grade 1	90	8	8.9	103	7	6.8	119	3	2.5
Grade 2	105	8	7.6	83	8	9.6	132	1	0.8
Grade 3	102	28	27.5	118	16	13.6	112	1	0.9
Grade 4	118	32	27.1	97	25	25.8	122	4	3.3
Grade 5	130	30	23.1	114	21	18.4	127	7	5.5
Grade 6	108	27	25.0	126	17	13.5	121	2	1.7
Total	653	133	20.4	641	94	14.7	733	18	2.5

Table 15.2 High school level grades (Philippine Cultural College 1994, 1995, 2013a)

Year level (High school)	School year 1993–1994			School year 1994–1995			School year 2012–2013		
	No. of students	No. of students who failed in Chinese	(%)	No. of students	No. of students who failed in Chinese	(%)	No. of students	No. of students who failed in Chinese	(%)
Year 1	190	43	22.6	187	27	14.4	94	0	0
Year 2	143	27	18.9	144	10	6.9	93	3	3.2
Year 3	94	6	6.4	96	3	3.1	101	10	9.9
Year 4	71	1	1.4	73	1	1.4	104	0	0
Total	498	77	15.5	500	41	8.2	392	13	3.3

15.5 Future Directions

As a way to supplement the students' learning of the Chinese language, the school takes extra steps to further immerse the students in Chinese culture. This includes activities such as singing competitions, orations and declamations, drama festivals, story-telling contests, and Chinese book fairs. Chinese-speaking campaigns have also been launched, along with extracurricular clubs for calligraphy, Chinese orchestra, and declamation.

As a way to further check the quality of Chinese education in the school, students are also required to partake in the standardized international Hanyu Shuiping Kaoshi (HSK, test of Chinese Proficiency). HSK type of questions have been incorporated in the regular quizzes and periodical examinations as early the elementary grade four, and results have been promising (Philippine Cultural College 2013b). For the previous school year (school year 2012–2013), the elementary grade six graduates took the level 3 HSK, the passing rate was 90.68 %; the high school regular class fourth year graduates took the level 4 HSK, the passing rate was 81.71 %; and the high school pilot class graduates took the level 6 HSK, with a 100 % passing rate. This further validates the effectiveness of the second language model.

Teachers have undoubtedly been an integral part of this curricular reform. There has been a dearth of quality Chinese educators in the country, but steps have been taken for improvement. Aside from the training mentioned above, Chinese language teachers have also been sent to take up courses of Chinese language teaching in China. Since 2004, 14 high school graduates have been a part of the program, and 12 have so far come back to serve their alma mater. Tenured teachers are also encouraged to take a correspondence course sponsored by the Overseas Chinese Affairs Office of the State Council of China and Jinan University in coordination with the PCERC. At present, there are 10 teachers taking the course, and they are expected to graduate within this year or early next year after submitting and defending their theses.

PCC teachers have also been going around the country, sharing how teaching Chinese as a second language can yield results with the use of the proper pedagogical techniques. To date, we have had around 60 teachers who have done this around

the country. Moreover, three of our teachers have won awards and recognition in the international search for the "Outstanding Chinese Language Lesson" and the "Outstanding Chinese Language Lesson Plan" sponsored by the Chinese National Office for Teaching Chinese as a Foreign Language.

For its effort to uplift the quality of Chinese language teaching in the country, PCC received recognition from the Overseas Chinese Affairs Office of the State Council of China in 2009 as the "Model School in Chinese Language Education".

15.6 Conclusion

As has been presented throughout this paper, the second language model of teaching Chinese in the Philippines holds promise. From the initial results, it serves to maximize the students' proficiency in Chinese while at the same time allowing them to complete their integration into the Philippine culture. While the current generation might not reach a proficiency in the language that equals that of their ancestors, the hybridization of the Chinese and Filipino cultures is inevitable and irreversible, and thus we can only keep changing the system of education to adjust to the mixture of the two cultures. The previous notion of Chinese as a first language simply cannot keep up with the culture. The quality of Chinese education will only go as far as its goodness-of-fit to the learners of the language, and it seems only right that the endeavor will adjust to the changing times. As we shift Chinese education into the perspective of it being taught as a second language, we realize that the language will never be the same as it was before its Filipinization, yet it seems that this is the only recourse to maximizing the appreciation of a new generation of Chinese-Filipinos to the roots of their ancestors.

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Chapter 16
Perceptions of East Asian Students in Canadian Graduate Schools: What They May Indicate About Student Speech in a Chinese Model of Education

Shu-Chen Tsai

Abstract This research examines the perceptions of 18 East Asian Canadian graduate students from four cultures strongly influenced by Confucian thought regarding their experiences in Canadian graduate schools in terms of what their perceptions may indicate about a Chinese model of educational practices regarding student speech. The research is presented within the context of two polar versions of a Chinese educational model of education; one that is described as a centuries old social tool created to maintain political and social control by channeling and homogenizing potential intellectual talent towards support of the status quo and away from creative, independent, and critical thought and one that is described as a being a model of genuine individual thought and analysis produced as a by-product of seeking to "self-perfect" in terms of fully integrating oneself into the Confucian social order and structure. The research examines the responses of the participants in terms of these polar models.

16.1 Introduction

That there is some pattern of learning/teaching principles of Chinese education that cluster around the name of Confucius and his disciples as presently interpreted in the ordinary lives of Asians and described as "vernacular Confucianism" by Chang (Chang 2000; King 1992) seems beyond question. Having begun in China, this cluster of education-related principles spread in greatest force to the cultures of Taiwan, Korea, and Japan such that today they, together with China, constitute the four clearest cultural examples of the educational principles of Confucius (Yum 1994). It was for this reason Canadian graduate students from these four cultures

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were selected for this research as well as the fact that these cultures are also among the greatest contributors of foreign students to the graduate schools of Canada (Canadian Bureau for International Education).

This chapter attempts to deduce something of the characteristics of the role of student speech as part of the learning process in a Chinese model of education. The chapter is part of an original, larger phenomenological, qualitative, in-depth examination of 18 Canadian graduate students previously socialized from elementary through undergraduate university education in the above noted Confucian influenced cultures. All participants had been in Canadian graduate schools for at least a year. The purpose of the original research was to examine the transition difficulties of these students in hopes of making transition from the Confucian influenced Chinese education model to the Canadian education environment easier. Here the research data are used to address the narrower question of student speech participation in a Chinese educational model.

The criticism of Wang and Lin (2005) regarding the tendency of research in this area to ignore differences between individual East Asian cultures as well as the failure to examine non-school factors relating to student performance is well taken. However, because this was qualitative, phenomenological research using small numbers of participants and exploring for areas of future research rather than statistical results regarding specific hypotheses, no attempt is made here to either distinguish the cultural variation(s) of the four separate cultures studied nor to attempt to examine non-school factors.

The format of the chapter frames the issue of student speech in a Chinese model of education in terms of two recent polar lines of research, one offered by Li (2012) who explicitly paints a picture of a Chinese model of education regarding student speech, the other by Zhao (2014) who never explicitly discusses student speech but paints a picture of a Chinese model of education that implicitly discourages and rejects it. Though Li is a much quieter Freire and expresses none of the class oppression concepts that so concerned Freire (2000), the Li (2012)/Zhao (2014) contrast nevertheless presents a particularly Chinese version of the admonition of Freire (2000) that:

> There is no such thing as a neutral educational process. Education either functions as an instrument which is used to facilitate integration of the younger generation into the logic of the present system and bring about conformity or it becomes the practice of freedom, the means by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world (p. 34).

As Cheng (1985) informs us, the ideas of Confucius together with those of his disciple, Mencius, have "dominated the educational life of Chinese, Korean and Japanese peoples in the past thousand years (p. 198)." Slingerland (2003)

However, the nature of the characteristics (in this case, the student speech characteristics) of a Chinese educational model is less clear than its Confucian influence. Lee (1996) says that "…close scrutiny of the Analects reveals that the term 'learning' pervades the whole literature, thus qualifying it to be called a book of learning (p. 27)." However, from the perspective of Western learning, the Analects has relatively little that directly addresses student speech as well as little that casts

speech as unqualifiedly positive. Instead, we encounter speech sentiments of the following nature: Fine words not virtuous (1:3); what good the tongue (5:5)?; principled conduct is heard, lecture is not (5:13); hear much, speak cautiously (2:18); act first and speak through acts (2:13); man of virtue slow of speech (12:3); speak humbly or you cannot carry out your words (14:21); clever words disrupt virtue (15:26); speak only enough to make point (15:40); friendship with glib-tongued is dangerous (16:4); heaven is silent; Confucius preferred to avoid speech (17:18).

Though it would be erroneous to suggest that the Analects recommends total learner silence it does appear to prescribe a learning approach wherein student speech (and speech in general) is slow, humble, highly considered before uttered, and much inferior to conduct. Because student speech has been so central in the Western educational edifice from Socrates down through Dewey, and now Freire, it is natural for the West to not only wonder but to also be suspicious about the learning efficacy of the role of student speech in the Chinese model of education.

16.2 The Paradox

According to Rao and Chan (2009) it was evidence that students produced by the Chinese educational model appeared to be successful and competent learners that caused Watkins and Biggs (1996, 2001) to coin the phrase "Paradox of the Chinese learner (p. 4)." It referred to the seeming fact that Chinese students educated in large classes using teacher centered, lecture methods traditionally associated with only rote, surface learning, nevertheless produced students that scored higher on measures of deep learning, had a good understanding as well as good academic performance, and preferred high level, meaning based learning strategies. In other words, it appeared that poor teaching was somehow producing good learning.

Since its first use the paradox has been probed on many scores but the apparent result is that the paradox has been at least somewhat clarified and demystified if not fully clarified. Thus, in The Chinese Learner, Biggs (1996) explained this paradox by asserting Western misperceptions regarding the barrenness of the Chinese model of education:

> Despite large classes, external examinations, seemingly (to Westerners) cold classroom climates, and expository teaching, there are things going on in the fine-grain which are clearly adaptive: predispositions to put in effort and seek meaning; to persist in the event of boredom or failure; and to foster the kind of interaction between teacher and student, and student and student, that engages higher rather than lower cognitive processes. Thus, gross characteristics, such as class size or even heavy external examinations, take on a different meaning in the CHC context to those in the Western context (Biggs 1996, p. 63).

Biggs' (1996) analysis provided light to both the question of whether there is a Chinese model of education as well as to the question of its characteristics. Suggestions of possibilities of warmth in hierarchical relationships and of strange mixtures of authoritarianism and student-centeredness that included "hand-holding" (p. 56) set in a cultural milieu that made students more teachable (rather than merely

docile) and convinced them that failure to learn was to be attributed to themselves rather than being caused by external factors not only placed the "paradox" in a new light, it also provided additional interest in re-examining the nature of a Chinese model of education.

16.3 The Research Poles

But what of the specific issue of student speech in such an educational model? Intensive examination of students through what were called by Hess and Azuma (1991) "sticky-probes (p. 6)" suggested some possibility of student speech but the concept was actually developed in the context of Japanese mother/child communication, not teacher/student communication. Likewise, though somewhat warm teacher/student relations and some degree of student centeredness, with hand-holding, might also suggest some element of open communication involving student speech, both suggestions provide relatively little insight as to the amount or nature of the speech and its relationship to and effect upon the learning process.

There has been significant research regarding speech related traits of Chinese students in American classrooms. We know they use silence as a strategy to avoid disagreement (Ho and Crookall 1995; Jackson 2002), that they self-monitor to avoid disagreement or criticism of peers (Carson and Nelson 1996), that they like teacher-centered styles of teaching and show great respect to their teachers (Cortazzi and Jin 1996; Kirkbride and Tang 1999, cited in Chan 1999), that they limit the time of their speaking in class to avoid showing off by their Chinese peers (Liu and Littlewood 1997; Jackson 2002) and that they are quicker to label serious listening as a form of class participation than their American peers (Jackson 2002). However, to the knowledge of this researcher, no previous research has involved students in Canadian graduate schools that have previously been exposed to a Chinese model of education up to and including an undergraduate university degree.

This research proposes that the issue of the nature and role of student speech in a Chinese model of education may be meaningfully examined along a continuum running between the poles of two recent lines of research; one offered by Zhao (2014), the other offered by Li (2012). At one pole, Zhao (2014) describes a Chinese educational model wherein student classroom speech is discouraged as subversive and is viewed as destructive to independent student creativity and, at the other pole, Li (2012) describes a Chinese educational model wherein student classroom speech, though very dissimilar to that in the West, constitutes a finely crafted, but subsidiary to listening, tool in the learning process. Between these two poles the data of this research is considered.

16.4 Student Speech: The Chinese Educational Model of Zhao

As an American of Chinese descent, Zhao (2014) argues against American adoption of the Chinese educational model, hence the name of his book "Who is Afraid of the Big Bad Dragon?" In doing so, Zhao (2014) offers a picture of a Chinese educational model having some favorable aspects but that is overall negative. Noting that "I write this book to show how China, a perfect incarnation of authoritarian education, has produced the world's best test scores at the costs of diverse, creative, and innovative talents"…and that those who admire such an educational model ignore that it "…is incapable of supporting individual strength, cultivating a diversity of talents, and fostering the capacity and confidence to create (p. 9)," Zhao (2014) then presents a largely historical analysis. With few direct references to the writing of either Confucius or his disciples, Zhao (2014) describes the Chinese educational model as being the by-product of two historical developments, both relating to Confucianism.

The first historical development involves an early emperor who sought to create a system for maintaining political power by drawing the culture's intellectual elite to provide counsel to him while, at the same time, diverting their potential criticism and potential for creating rebellion. As described by Zhao (2014) the Emperor Yang Jian (Wen) in the Fifth Century,

> …needed a way to weaken the heredity powers of certain families and tribes. Thus, he needed to find people who could help govern the country without relying on the existing ruling class. He also needed a way to prevent capable talents from rising against the empire and to reinforce among his subjects the need to obey the rightful rule of the Son of Heaven (p. 38).

To achieve his objectives, Emperor Wen instituted improved imperial exams, called *keju*, which tested by memorization over the Confucian classic writings as a way to select capable talents. In what Zhao (2014) describes as "a clever ploy of social control (p. 37)" the exams served to achieve his goals for centuries:

> For thirteen hundred years Chinese emperors were delivered a homogeneous and obedient citizenry in three ways. First, through the exams they recruited individuals who demonstrated the greatest commitment to Confucian thinking to help defend the status quo and perpetuate the regime…Second, even those who failed at the exams became defenders and promoters, because often they were hired as teachers to help prepare future generations for the exams. Third, after decades of studying the Confucian texts, even if a man did not become a believer, he would have little time, energy, and resources left to develop the skills, knowledge, and independent ideas needed for a rebellion (p. 40).

According to Zhao (2014), these homogeneous and obedient products of *keju* had "similar minds, similar thoughts and similar talents (p. 41)." They became

> …guardians of the existing order, and they helped maintain a unified nation. Their minds were steeped in Confucian philosophy which forbade them to have any unorthodox thoughts. Their lack of knowledge and skills outside the narrowly defined domains of the

> imperial exam rendered them incapable of putting up a rebellion even if the thought had occurred to them (p. 41).

The second historical development that Zhao (2014) argues greatly affected the present model of Chinese education involves the process whereby the *keju* effect of producing a conservative Confucian-orientated, stable society, enabled the Chinese to achieve world cultural dominance, thereby creating an almost reverence in the mind of the Chinese for *keju*. According to Zhao (2014) this prevented the chaos of frequent rebellion and gave resultant social stability, which, together with a large population, provided China with an environment favorable to technical innovation and eventual world cultural dominance. Zhao (2014) explains:

> Rudimentary technological innovations can be made by accident. The probability of such accidents is the same for all societies, and thus the more people in a society, the higher the probability is of accidental inventions…People did however need a relatively stable in order to engage in activities that might lead to discovery. They also needed time and certain resources. *Keju* helped build a unified nation with a large population, so it could have a large pool of accidental discoveries. *Keju* also provided relative stability and economic prosperity, so people could engage in productive activities pregnant with possibilities of accidental invention (p. 36).

However, having praised *keju* in producing Chinese cultural dominance in the past, Zhao (2014) damns it as the cause of China's inability to compete technologically with Europe's cultures following the industrial revolution. Zhao (2014) argues that the *keju* based educational system of the past that had produced social stability and allowed for the accidental innovation that had made China great was, in fact, detrimental to the ability of China to compete in the industrial era for the reason that it restricted social mobility to only one social group and, in doing so, had producing a homogenized, backward looking, narrowly skilled, cultural leadership incapable of the type of individual creativity and scientific thought required for success in the industrial age. Zhao (2014) writes:

> But the industrial revolution changed everything, ushering in a new era in which change became the constant, innovation the norm, and diversity of talents the source of social development. In this new era, *keju*, which reinforced conservative thinking, and homogeneity, changed from a blessing to a curse (p. 42).

Notwithstanding, its transformation from blessing to curse, notwithstanding that China has numerous times tried to exterminate the influence of *keju*, and notwithstanding that the Emperor has been replaced first by the republican government and then by the Communist party, Zhao (2014) argues that *keju* has survived. Calling it "The witch that cannot be killed (p. 148)", he argues that the model of Chinese education is today as it always has been saying,

> In reality, the essence of Chinese education remains the same as it was ten years ago, twenty years ago, one hundred years, even one thousand years: the system prepares students to pass exams that are believed to lead to a few socially and materially rewarding jobs (p. 159).

Zhao (2014) describes a Chinese education model that to this day is characterized and dominated by *keju*. He says that "Chinese schools exist for test prep…" and that "(e)very class, every teacher, every school is about preparing for the exams

(p. 132)." Zhao (2014) describes a Chinese educational model that homogenizes rather than diversifies thinking and says that it is "in essence, a process through which those willing to comply are homogenized, and those unable or unwilling to comply…are eliminated (p. 124)" and describes a Chinese educational model that is authoritarian and hierarchical, saying "As a historically authoritarian society organized around the Confucian philosophy, China gives a hierarchical order to every facet of life…to other persons, places or things (p. 125)." Finally, Zhao (2014) describes a Chinese educational model that emphasizes a narrow band of readily testable skills where the goal of students is to select "the correct answer and give the answer in expected ways" and observes that "This finding and answering of predetermined answers is antithetical to creativity, which requires the ability to come up with new solutions and pose questions that have never been asked before (p. 133)." Zhao (2014) describes a Chinese educational model that was originally, and remains today, one of social control where students seek to please at the cost of achieving creativity, saying: "Chinese education is more of a tool for social control than a process of self-enlightenment…Creative talents are rewarded only when their creativity happens to be desired by the government (p. 160)."

Zhao (2014) rarely addresses student speech in his model of Chinese education but his model descriptors have obvious implications for his view of the role of student speech in the model he describes. The model Zhao (2014) represents is a device of social control and students learn not to be individual and creative but how to please their superiors as the result of an educational model process wherein homogenization of thinking rather than diversity is valued and encouraged and voiced difference may be viewed as subversive. It is an authoritarian model where student reward lies in giving predetermined answers in the required way to powerful educational superiors regarding a narrow set of skills that are perceived to be readily testable and for which student speech has little learning utility or relevance.

16.5 Student Speech: The Chinese Educational Model of Li

In her book, "Cultural Foundations of Learning: East and West", Li (2012), unlike Zhao, relies more upon interpretation of Confucian classics than upon pure historical analysis. Additionally, unlike Zhao, Li speaks much more directly to the place of student speech in her Confucian based analysis of a Chinese educational model. Finally, unlike Zhao (2014), who presents a somewhat negative and even cynical description of a Chinese educational model and strongly advises America to avoid its path, Li (2012) offers a more balanced analysis wherein she compares Western and Eastern models and suggests to Western educators that the Chinese model is a legitimate approach to learning though one with different goals, different pedagogy, different teaching methods, different teacher/student relationships and different epistemology. Li (2012) argues that the Chinese model of education has much to recommend it and that Western educators should be open to learning from it.

In considering the role of student speech in a Chinese model of education, Li (2012) first explains that Chinese education has a different purpose than that of Western education. Unlike Western education, that Li says seeks to know "the external world (p. 22)", Li asserts that the goal of a Confucian influenced Chinese model of education is not understanding but rather, self-perfection which she says is to "follow the path of moral self-cultivation (p. 297)."

As an educational model with a different goal, it should not be surprising that methods should be different. In fact, according to Li (2012), such is the case, especially regarding student speech. Since the educational goal of moral self-cultivation is thought to emphasize one's deeds rather than what one says, then one's speech must be measured against one's deeds. This perspective, Li suggests, causes speech to take on a relatively serious character in the educational process because it is thought to either represent or assert one's level of moral development in terms of deeds. (This is a sobering view from the Western perspective, and, if taken seriously, would arguably be also somewhat silencing.) As Li (2012) characterizes the concept, "Therefore, a person's speaking cannot be divorced from his or her moral character. Speaking is not just one's cognition and knowledge or any spontaneous, freestanding utterance, but a reflection of one's moral worth (p. 297)."

In addition to student speech being affected by a different educational goal in the Chinese educational model, Li (2012) also explains that educational models of the East are influenced by different cultural perspectives regarding speech than those found in Western cultures. She notes that, unlike the West, East Asian cultures have no tradition of great leaders that are known for speaking, and explains that it is because the cultural tradition of East Asia "actually devalues-or more appropriately put, distrusts, verbal eloquence as a means to achieve worthy ends (p. 198)." Building further, Li notes that none of the major religions of East Asia—Buddhism, Taoism, and Confucianism—emphasize speaking or speech and that heaven is represented as silent in all of these traditions.

Finally, Li (2012) identifies three types of negative speech, all of which threaten students' goal of moral self-cultivation as well as three speech virtues to be cultivated in the learner in order to counteract them. The first category of negative speech is a glib tongue which "divorces the mind from the heart", the second is flattery, which "undermines sincerity", and the third is boastfulness, which "lacks humility (p. 297)." The first of the speech virtues (antidotes) is the emulation of "*tian*", the Confucian notion of Heaven. According to Li (2012), the Confucian notion of heaven "is speechless, but virtuous, to be emulated (p. 299)." Tu (2003) explains that to achieve full human realization humans must measure themselves by the standards of Heaven. However, since heaven does not speak, we must be constantly seeking it. Tu (2003) says, "To make ourselves deserving partners in Heaven, we must be constantly in touch with that silent illumination that makes the rightness and principle in our heart-minds shine forth brilliantly (p. 172)." The second virtue to counter negative speech is to be sure that one's deeds exceed one's speaking. Li (2012) expresses it as "deeds shall exceed words… (p. 297)." The final virtue to be cultivated to counter negative speech is to adjust speech to meet social context.

Li (2012) expresses it as speech that has "attunement to social context and relationships… (p. 299)."

In addition to the three negative speech prohibitions and their corresponding speech antidotal virtues, Li (2012) further describes four East Asian general cultural speech maxims: speak little, speak with ambiguity, speak amicably, and long and serious listening must precede speaking.

Li's (2012) view of speech in a model of Chinese education reflects powerful speech inhibitions: avoidance of glibness, flattery, and boastfulness, a desire to aim toward the silence of heaven, a hyper-awareness of shaping one's speech to recognize relationships and social decorum in the classroom all done within a moral context that cautions that one's saying is to assert one's doing. Beyond these inhibitions, East Asian learners are further conditioned to be brief, to be vague, to be socially tuned hierarchically, to be amicable, and to be predisposed to privilege listening over speaking.

For Li (2012), students of East Asia are capable of using speech as a tool of learning but it is a tool that requires careful, deliberate use. In her Chinese model students do not disvalue speech but rather they value it too much to use it indiscriminately, especially where disharmony could result. They have been socialized to see speech as a very special, powerful tool that must be used carefully within the context of humility, sincerity, social awareness, amity, and always, always as the lesser half of a listening/speaking two-part team.

16.6 Participant Responses and Discussion

As earlier noted, the participants' responses were solicited as part of a qualitative examination and no attempt was made to differentiate between the four East Asian cultures examined. That said, they did reveal somewhat of the contours of their culturally mixed but common Confucian influenced Chinese model of education present in their home countries. The contours and the data transcripts illustrating them are presented below.

16.7 Self-Perception as Speakers and Learners

All 18 of the participants representing the four cultures examined reported themselves as well as other East Asian students in their classes to be "more silent in their Canadian classes than others." Though there was strong agreement that they and their East Asian peers were more silent in class than others, there were equally strong feelings that as individuals they were effectively learning in their Canadian classes. Though all but two of the participants acknowledged they felt that oral participation in class was educationally productive, all felt that a good quality of learning could be equally well achieved by close listening. Frequently, the

participants cited their listening skills together with much out of class discussion with either their peers or instructors as compensating for their failure to participate orally in class.

> Comment 1: "I agree that normally East Asians are more silent in class. I think we have been educated in that way, right? We are listeners. We are not thinkers. We are not questioners. We do not question the teacher and normally (in their country of origin) we are not allowed to."
>
> Comment 2: "I do agree that East Asian students are more silent in class. That is probably because…we were educated that way. We seldom challenged professors. We seldom challenged what the teachers say in anything in the class."

16.8 Reasons for Their Comparative Silence

All of the participants reported that language skills played some part in their classroom silence and all also cited lack of knowledge about Canadian cultural activities often discussed in class. Two cited lack of a good understanding of cultural cues as to when class discussion was appropriate. However, all participants reported that their silence, in addition to language problems, was directly related to their earlier educational socialization. All participants except one (one had prior experience being taught by Western teachers in her home culture) reported surprise at the degree of student oral participation in class learning that they encountered in their Canadian classrooms. All but one of the participants reported that they felt they were making meaningful progress toward greater oral participation in their classes.

> Comment 1: "Basically being a student in the educational system of my county was pretty much like sitting in the classroom, listening to the authority, taking the notes, listen to or obey to what the teachers said."
>
> Comment 2: "And even we had questions, the teachers, professors might say, "ok, we are not there yet, we will talk about this" or maybe they just don't know the answer but they just say we are not there yet or "focus on what I have taught you, you don't need to learn other than what I have taught you", or something like that. So this eventually socialized East Asian students not to ask the reason because, for one thing, they could not get answers from their teachers, even if they have questions, for another, they were not encouraged to challenge the professors."
>
> Comment 3: "I've never been told to speak up my opinion of things and the other thing is like I feel everybody knows what you know. I feel like the thing that I think of probably everybody knows. And in Japan, there is kind of like the atmosphere you have to speak the right thing, you have to speak something correctly. Here it is more like you have to share something you think you have or to share what you have. So it is like being right in Japan and it is like being a contributor by sharing information in Canada."
>
> Comment 4: "Chinese professors, I'd say… so typically Chinese professor, he controls, he is not that open for suggestions. He believes he is supervisor so maybe he is something higher than you. He knows better than you and he, if he tells you things to do then you do it, you don't question."

16.9 Attitudes Regarding the Speech Environment of the Canadian Classroom

All except two participants expressed strong preference for the oral participation style of learning in the Canadian classroom over the lecture style of their home countries. (One dissenter was also the eldest participant interviewed and felt that class discussion was wasted time and should be used for the professor to speak.) Frequently the expression of preference was voiced in very strong and enthusiastic terms. When asked why they preferred the Canadian educational environment over their own culture, the common answer was that it was more effective in promoting "critical thinking." There were also frequently feelings expressed by participants of a sense of obligation to the other members of the class and to the teacher to participate in oral discussion to "pay back" for the information that other students had offered.

There were numerous mentions of surprise that Canadian students spoke openly about things that seemed very personal as well as surprise that other students and professors could really be interested in what seemed personal and insignificant things to participants. A minority of participants reported the feeling that when they did speak in class they felt they must have something very significant or insightful or important to say or else they would not speak. There was also some frustration/disgust expressed for Western trained professors who returned to their countries and then taught in traditional Eastern style.

> Comment 1: "The professors here, and colleagues here, and friends and mostly myself, asking myself, why, why? Start to reason, so yeah, and I'd say it is mostly enjoyable, even though it is not easy, it is challenging but (Researcher asks: Do you like class discussions and presentations?) Oh, um, I love the class discussion. I love the open discussion and I love how professors and colleagues and classmates, they appreciate your contribution no matter what you say as long as you are interested in what you say which is related to yourself and related to the topic and related to their teaching lives."
>
> Comment 2: So I found that to be a student in Canadian education you have to be very, very critical and to criticize and challenge your previous knowledge, especially when I read, for example, when we read the professor always challenges you to see anything that you disagree with the author's opinion rather than teaches you the author's opinion just challenges your understanding and ask a lot of questions. So basically that is what I found out.

16.10 Conclusion

The participants' responses make clear that they were originally socialized in an educational model based on authoritative teachers wherein there was little encouragement to engage in classroom discussion or to question teachers or peers. They were expected to listen to and absorb in a detailed way and their examinations tested the degree of detail of their absorption. It also appears that their educational practices were not perceived by them as demanding student imagination, creativity or

critical thought. These traits would seem to confirm the view of Zhao (2014) regarding the Chinese model of education and would suggest little or no place for significant student speech.

On the other hand, the responses of the participants show a surprising learning flexibility based on their reported attitudes. Except for two respondents, there was universal expression of admiration for the Canadian model of education, its use of student voice in constructing learning, and its perceived production of critical thought. If students of the Chinese model of education are only passive, rote learners as suggested by Zhao (2014), it would seem that they would be unable to comfortably adapt to the new environment of Canadian education and if they did adapt it would take long time. As has been noted, just the opposite is the situation. Their general responses reveal learners that have the capacity to grow in the Canadian system and, just as important, to like and enjoy the process and the critical thought it seeks to develop.

Somewhere in the Chinese educational model background of these learners (or in their homes, communities or other agencies of learning) there must exist teaching practices and experiences and values that nurtured their educational flexibility, nurtured a potential to enjoy the constructivist environment of Canada, and nurtured a potential to appreciate critical thought.

Discounting the possibility that bad teaching in their cultures of origin had the effect of producing the characteristics of learning flexibility and appreciation for critical thought (two of the ingredients Zhao (2014) found so absent in his view of a Chinese model of education), this research presents another paradox similar to that encountered by Wang (2013) where it was found that Chinese students displayed an unusual flexibility in their learning when subjected to other educational systems and that the "adaptive characteristic of Chinese students is seldom identified among students in the Western context (p. 284)."

The present research leaves this paradox as well as its similar, parent paradox of Watkins and Biggs (1996, 2001) unresolved. Clearly, the Chinese educational model presented by Zhao (2014) reflects a teaching environment that would be evaluated negatively in the West yet it is equally clear that it produces student qualities (learning flexibility and appreciation for critical thought) that are sought in the West. In order for Zhao's (2014) view of the Chinese model of education to be confirmed it would seem that he needs to not only demonstrate that the deep learning reports regarding the Chinese learner are in error but he must also account for the learning flexibility these learners appear to possess. On the other hand, Li (2012) does, at least, offer a partial explanation for this in her description of the listening and speaking approaches and values of a Chinese educational model. Nevertheless, the details of the actual operation of her "quiet learner" Chinese model remain full-term pregnant for further research.

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Chapter 17
Educative and Child-Rearing Practices Among Recent Chinese Migrants in Australia: Continuity, Change, Hybridity

Wei-Wei Da and Anthony Welch

Abstract This qualitative study analyzed educative and childrearing practices of Chinese immigrant parents from China, living in Sydney, Australia, and data on Chinese educational patterns. Evidence of the study highlights a continuity of childrearing practices with distinctive cultural traits expressed in the emphasis on mother-tongue maintenance, strictness and parental control, as well as intensive parental engagement in children's education. Some changes in their expectations and parenting styles were also noticeable in adapting to a new environment. The findings suggest a hybrid model among the middle-class Chinese immigrant families, given the highly-skilled character of recent immigrants. Findings from this study also suggest that educational attainments of children of immigrants may not be limited to formal education, but are also associated with various social and cultural mores embedded in the family.

17.1 Introduction

In this chapter, educative and childrearing practices among recent Chinese immigrants from the People's Republic of China (hereafter China) living in Sydney, Australia are examined. A desire to seek greater opportunities for their children's future has been explicitly reported by many Chinese immigrants as one of the key rationales for migration (Chi 2014; Da 2001). Education is often seen as critical for immigrant parents to ensure their children's social and economic success in the new country. Childrearing and educative practices provide perhaps the best expression of cultural values and beliefs, each referring the desire to both meet children's basic

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needs, but also to transmit cultural values and norms from parents to their children. Through daily socialization, children develop a sense of their identity and status, as well as a way of thinking and acting aligned (more, or less) with their culture (Ward and Belanger 2011). As the primary social institution, the family is important in helping children establish their attitudes and aspiration for the future, while formal education is a further critical arena, in which such values and practices are played out, and at times tested. In the current context, negotiating between tradition and change is a more complex task, given the added task of succeeding in a new culture, a new environment. In such a setting, differences and tensions between parents and children commonly emerge, as each generation explores and negotiates the new environment differently.

But the picture is even more complex than suggested above. All too common, at least in Western accounts, has been a single, monolithic picture of Chinese parenting styles, which emphasizes strictness and parental control (Chao 1994; Chua 2011; NY Times 2015). According to such accounts, there is a standardized pattern, a lack of variation. As *inter alia* Crissman (1991) argued, however, the long history and great size and diversity of the Chinese diaspora, in many different contexts, means that the Chinese should no longer be considered a homogeneous group: a proper account needs to be taken of their diverse social and economic status, countries and regions of origin, religion and languages they speak.

This chapter examines educative and childrearing experiences of recent immigrants from China, living in Sydney, Australia. While Chinese settlers first came to Australia more than 150 years ago, initially meeting with significant hostility and discrimination, the character of recent migration is very different (Hugo 2005; Jupp 2001, 2002; Welch 2013). Since the 1980s, immigrants from China have become one of the fastest-growing migrant communities in Australia, and are now the third largest overseas born group in the country. In contrast to earlier eras, however, the large majority are now highly skilled; indeed more than 80 % of current Chinese migrants fall into the top three occupation levels – manager/administrative; professional; semi professional (Hugo 2005). Many new immigrants arrive with their children: hence by 2011, Mandarin had become the largest community language nationwide, and Chinese was the largest community language in Sydney, [if Cantonese and Mandarin are combined] (Welch 2013, pp. 103–4). Notwithstanding the increasing numbers, however, relatively few studies focus on childrearing practices among Chinese in Australia or analyses of their schooling patterns. Our goal is to identify major patterns of educative and childrearing practices of the Chinese after resettlement, specifically, what elements of the traditional Chinese educational model changed, and what remained unchanged, in the light of distinctive social, cultural and political features of China.

This chapter begins with discussion of the existing literature and relevant theoretical frameworks, followed by discussion of research methods and the sample of research participants. Findings are presented thematically with quotes, while the chapter concludes with a discussion and conclusion, indicating that Chinese educational models may not be limited to formal educational settings but are also associated with childrearing practices and parental cultures.

17.2 Segmented Assimilation Models

Immigration often involves changes to language, culture, economic status and ethnic identity (Berry 2007; Isajiw 1999). Classical theory based on naturalisation suggests that immigrants' assimilation tends to be associated with time residing in the new country. Such a linear theory sees immigrants' assimilation process as a "zero sum" phenomenon – learning a new culture results in abandoning an old one (Fong 2006). Indeed, a dominant assimilationist ethos meant that Chinese (and other) migrants to Australia in earlier eras were expected to give up their culture as the price for settling in the new land: 'Assimilation would be complete when nobody noticed the newcomer' (Jupp 2002, p. 22). Recent research, however, has contested the linear model by pointing to segmented assimilation observed among various immigrant groups and individuals (Boyd 2002). According to such models, the pace and levels of assimilation among immigrants vary greatly, due to factors such as age at immigration, countries of origin, language spoken, ethnic networks, education, and transnational activities (Albanese 2009; Fong 2006; Heisler 2008). Immigrant children have advantages, often adapting to the new culture at a faster pace than their parents. Research also found that immigrants often economically integrate into mainstream society, particularly multicultural nations such as Australia, the US and Canada, without abandoning their cultural traditions, language, and norms (Albanese 2009; Boyd 2002). Many make considerable sacrifices, with the benefits largely being passed on to the next generation. Immigrant assimilation is not only a gradual process but also selective, based on their interests. Such individuals often hold two or more ethnic identities, and often occupy an interstitial cultural space (Isajiw 1999; Hall 1992). Segmented assimilation models may also be perceived as a hybrid integration process among overseas Chinese community.

17.3 Social Capital, Childrearing and Education

Social capital consists of the resources that individuals and families accrue and deploy, including via networks and relationships (Coleman 1988; Lin 2001; Putnam 1993, 2000). Unequally distributed, social capital is inherent in social structures such as the family, religious groups, and the community, and can help facilitate actions of affiliates. Coleman expanded the notion by linking social capital to the development of human capital of children. Having access to various resources within an immigrant community, therefore, is beneficial to the cognitive or social development of immigrant children (Coleman 1988, 1990). Bourdieu sees social capital as the production and reproduction of privilege among group members, that involves deliberate actions, social obligations and connections among members of the group (Bourdieu 1983; Bourdieu and Passeron 1977; Lin 2001). Portes (1995) views social capital as the ability of individuals to command scarce resources embedded within the social structure. Portes identifies two sets of social capital, one

for parents and the other for children. For parents, social capital refers to the ability to obtain assistance and support from people with the same ethnicity to strengthen their position versus their children and to take control over their behaviour. For children, social capital refers to the ability to command resources controlled by the family and the ethnic community.

The notion of social capital has been widely used by scholars to examine the link between immigrant families and children's school performances (Hagan et al. 1996; Sandefur et al. 2006; Zhou and Bankston 1994). Zhou and Bankston's (1994) study of second generation Vietnamese youth showed community resources helped improve children's school performance, rather than the cultural values held by their parents. Conversely, the absence of such resources hindered children's school performance (Hagan et al. 1996). Other research also suggests key factors associated with immigrant children's school performances to be the social and economic resources of immigrant parents, and their educational levels (Fuligni and Fuligni 2007). Social capital is therefore seen as a key variable in understanding how some children of some immigrant parent groups are successful in school despite various difficulties and barriers, while children of other groups are not (Portes 1995; Zhou and Bankston 1994). Ethnic community and religious group affiliation may help immigrant parents correct children's unwanted conduct, while strengthening ethnic identity, cultural transmission and mother tongue maintenance (Chen 2008; Da 2010). A sense of family obligation (e.g., parents to their children and children to their parents) is found to be positively associated with academic motivation of immigrant children according to Fuligni and Fuligni's (2007) study, and given this is prized within Chinese families, it can be seen as associated with Chinese schooling success in the Australian context (see below).

17.4 Methods

Evidence included both a qualitative study of Chinese families, and data on migration and educational patterns. The qualitative study analyzed childrearing practices of 28 Chinese parents (14 males and 14 females) who had children born either in China or Australia, and who lived in Sydney. Closed and open-ended questions in several areas highlighted cultural values and beliefs on childrearing and education, expectations of children, attitudes toward strictness in childrearing, and educative patterns. Demographic profiles of respondents were also gathered. Snowballing, supplemented by assistance from the Chinese church and community associations was the primary sampling strategy.

Most respondents had arrived in Sydney, Australia in the late 1980s and early 1990s. A majority came as English language students, while a few came for employment and family reunion. While their age ranged from mid 20s to 50s, the majority were in their 30s (a pattern reflected more broadly among recent Chinese migrants). Reasons for immigration included aspirations for their children's future, seeking a better life, seeking democracy and personal choice. Upon arrival, 25 held

university degrees, while two had college diplomas; only one had not progressed beyond completing secondary school. Most had held professional jobs such as school/university teacher, researcher, engineer and government employee prior to immigration. At the time of the study, half were working in professional jobs, while some held jobs below their educational credentials. Among the 28, 20 were one-child families, seven had two children and one family had three. Nine reported religious affiliation with Christian churches, while the rest reported no religious affiliation. However, most reported irregular participation in social activities organized by religious groups.

The fieldwork involved interviews of between 1 and 3 h, in their mother tongue – Mandarin. Verbatim transcription of all interviews was carried out from Chinese into English by the Mandarin-speaking researcher. Data analysis was supplemented with social profiles, interviews and some on-site observations. Findings are presented thematically with quotes from respondents whose names and identifiable information have been changed.

17.5 Results

17.5.1 Maintenance of Mother Tongue: Multiple Meanings and Strategies

Mother tongue maintenance – Mandarin rather than local dialect – emerged as both a new educational task for parents, and a way to maintain culture, despite the immediate need to help their children to learn English language. The importance and meaning of mother-tongue maintenance noted by respondents was threefold. First, it helps to maintain ethnic culture and self-identity among immigrant children. Wan, a father, in his 30s, remarked that his 8 year old son was experiencing problems with self-identity. He identified himself as Australian instead of Chinese, but was often labelled as Chinese by people in public. Wan voiced frustration at his son's identity issue, and thought it was a tragedy for him to come to Australia; however, his son did very well in school and had received the Principal's award. Wan associated his son's self-identity problem with his peers at school. In order to help his son cope, Wan tried to create a Chinese-speaking environment at home, but his son always responded in English (a common pattern among Chinese children, attempting to 'fit in' to a new and very different majority culture). Wan forced his son to attend a Chinese Saturday School to learn Chinese, but the boy always made excuses.

Mother tongue maintenance was both a challenge and an important educational task among numerous families interviewed. It was also seen as crucial to maintenance of kinship ties with family members in China. Huang, for example, a father in his late 30s, with a teenage boy, shared a story of his friend to illustrate the importance of mother tongue maintenance with kin. Huang noted that, after years in the USA, his friend visited to China with his son. However, the visit turned became sad and

awkward because his son could not communicate well with his grandparents and relatives in Chinese. The lesson Huang drew led him to implement a rule that, at home, Mandarin was the only language spoken. Huang stuck strictly to the rule despite his son's resentment at the beginning. Ultimately, his son ceased to complain.

For many respondents, mother tongue maintenance, meaning becoming bilingual, was considered an advantage for their children's employment in the future. As one of the respondents Li, a father in his 30s, noted:

> If we can offer our children to learn another language in a natural environment [at home], why don't we do it? In the long run there is an advantage if a person is bilingual rather than just speaking English. If our children become bilingual, it might be helpful for them to find an employment in China, since China is a big market…

While true that the ability to speak more than one language is often considered an asset in finding employment, it is equally true that such assets are commonly ignored. Apparently, the maintenance of mother tongue language was perceived as having multiple meanings. Many respondents mentioned that mother tongue maintenance was not limited to speaking, but also to the more complex task of writing Chinese.

In addition to strategies of making mother tongue the only language spoken at home and sending children to Saturday School, grandparenting offered another effective maintenance strategy. Among the 12 respondents whose children were born after immigration, 11 had either invited their parents to come over to assist them with childcare, or were sending their young children back to China to be cared for by their grandparents. The phenomenon is defined as transnational grandparenting (Da 2003). This phenomenon suggesting the hybridity of Chinese education models, served a dual function. Grandparents provided not only physical and emotional care, but also helped with the transmission of cultural heritage and traditions from the older generation to the younger, Some Chinese parents proudly noted what their children had learned while being cared for by grandparents: Ping, a mother of two children, in her mid 30s reported that her son [4 years old] learned to read and write about 300 Chinese characters when he was cared for by her parents in China. Na, a mother of two children in her late 30s, also noted that her son learned to recite a dozen classic Chinese poems during his stay with grandparents in China. The above cases also showed that Chinese parents culturally tended to focus on early literature and memory training. The heavy involvement of grandparents in immigrant childrearing practices is considered a feature of childrearing practices, and is a common feature of the mainland educational model.

17.5.2 Cultural Beliefs About Strict Childrearing

Childrearing in Chinese culture is generally seen as nurturing, protective and supportive (Mak and Chan 1995), while on the other hand, strictness and parental control is also valued and practiced. Strictness in Chinese culture means discipline expressed in exacting educational expectations; parental control and perhaps some physical punishment (slapping the hand, spanking a child's bottom), requesting children to stand in the corner for a while, or asking children to do extra homework and other tasks at home, are not uncommon. Such discipline is often perceived as expressions of parental care, and an effective way for parents to correct unexpected behavior and wrongdoing (Chua 2011). Among respondents, however, attitudes towards physical punishment diverged. Among the 28 parents, 14 (nine mothers and five fathers) agreed with some forms of physical chastisement. The remaining 14 (four mothers and ten fathers) disagreed with any forms of punishment. It is interesting to note that more mothers than fathers agreed with physical chastisement of children. The explanation may relate to differentiated gender roles that see mothers usually taking primary responsibility for child care; long hours of caring for a child could easily lead to physical exhaustion and impatience. Moreover, the term "physical punishment" involves various forms and consequences, and the degree of punishment is also hard to measure (Soriano 1995). Parents who supported some forms of physical punishment often claimed that the forms of punishment they used for their children helped to improve children's conduct. This is best seen in Ke, a mother of two children in her early 40s, with higher university degrees from China and Australia:

> I think some forms of punishment are necessary, in particular, when the child was young and misbehaved … if you just explained it, they would not understand it… Anyway I never really did any harm to my son, and he did learn how he should behave at home and outside the home.

Among respondents who agreed with some physical punishment, age was also noted. Some mentioned that they stopped physical punishment of their children when they started school. Equally, attitudes towards physical punishment were not necessarily associated with the level of education among respondents but cultural beliefs, as shown in the above case of Ke.

Respondents who disagreed with any forms of physical punishment may also have been aware of public attitudes towards physical punishment of children in the host country. Their negative stance towards physical punishment of children may thus be a sign of acculturation, suggestive of the development of a hybrid model of parenting and education. Among those disagreeing with physical punishment, views were associated with their own experience of growing up in China. Chen, for example, a father, expressed strong opposition to violence against children and women. He noted that he grew up in a family where there was no violence against children.

Interview data revealed an increase in parental control over children at certain points, especially regarding teenage daughters. Respondents who had teenage daughters reported various conflicts with their daughters, for example around

overnight stays in a friend's house. Teenagers were likely to ask parental permission to stay over-night at a friend's home, after a party. Chinese parents commonly rejected such request. Lian, for example, a mother of two children in her 40s, who reported a religious affiliation even before she came to Australia, had a teenage daughter. Lian made a rigid rule that her daughter was barred from overnighting in their friend's home, and required her to be home before midnight. She noted some level of tension generated between her daughter and herself in this regard.

> She [her daughter] was angry at me when we were back home and questioned me that why Chinese parents were like this, and why Australian parents won't care about this. I just stick to my rule and never give it up.

As a Christian, Lian sought support from friends in the church to help reduce intergenerational conflicts. High levels of parental control over a teenage daughter's desire to stay-over night at a friend's home was also found to be associated with perceptions of sexuality in the host society (Spirpak et al. 2007). Lian stated openly that she disliked local cultural attitudes toward sexuality, noting negative elements in countries like Australia, (sexual abuse, drug use and teenage pregnancy). Such high levels of control over teenage daughters' social activities rather than son's are noted in other studies of Asian immigrant families, such as Soriano's (1995) of study of Filipino immigrants, and Batrouney's (1995) study of Lebanese immigrants.

Parental control over teenage daughters was also expressed in other areas, such as ear piercing and wearing rings, necklace and braces. This was best expressed by Su, in his late 30s, with a teenage daughter:

> She [his daughter] wanted to have her ears pierced in order to put on earrings. I did not allow her to do this. Despite this is not a big issue, in my view, at her age it is not necessary to do those things, which would affect her study. Her major task now is to study well. As long as she is under 18 and is my dependent, I have the responsibility for her.

Su expressed a strong sense of parental authority and obligation surrounding his daughter. Culturally, Chinese parents believe that a major task for children is to study well. Anything perceived by Chinese parents as distractions from children's study, would be forbidden or discouraged. Cultural beliefs play a significant role in how these Chinese parents regulate their children.

17.5.3 Modified Expectations of Economic Return

Interviews revealed some changes with childrearing practices among the sample. In Chinese culture, parental expectations of children are often associated with the notion of filial piety. Children are expected to provide financial support and physical care to their parents in old age, as captured in the traditional Chinese four character aphorism *yang er fang lao* [keep one child for one's old age] (Michel 2014). However, respondents' expectations of children indicated divergence from those traditional values. While statements varied, they reported no expectations of an

economic return, or of old age care, as in the following quote from Wang, in his early 40s with a teenage son:

> I won't expect an economic return from him [his son] when we are getting old, but we [the respondent and his wife] do expect him to be able to get into a university, that is my only expectation of him, and that is why I came to Australia.

Wang further remarked that his immigration to Australia did not make any sense: he had a secure job and comfortable life in China, and no worries excepting his only child. He felt his son had few chances to get into any Chinese university because of the greater competition and fewer opportunities. Wang's wife remained in China to continue her business to support Wang and her son. Husband and wife visited each other twice a year, as do many other Chinese 'astronaut' families. Clearly, Wang and his wife sacrificed their personal life for their son's future.

Interviewee expectations of children tended to focus on the children themselves rather than the parents own needs, and underlined changed expectations regarding traditional cultural values of family obligations and commitment, as in the following quote from Ren in her mid 30s.

> I would not expect my children to take care of us when we are in old age. I don't want my son to feel that he has a commitment to us…. even now I still have the obligation to support my parents in China. I don't want my son to have a life like mine. I wish for him to have a delightful life, carefree and feel happy in this country.

Ren added that she would not care whether her son was able to enter university or not. She would not even care what jobs her child would take. As long as her son was happy, she would be happy. Ren's open-minded views may reflect influences from local mainstream society. The above evidence showed that some traditional cultural values and expectations of children among the sample were changed or modified in the process of assimilation into the mainstream society. Again, this reflects a change from traditional Chinese models, towards a more hybrid form.

17.5.4 Intensive Parental Engagement

Data from respondents revealed intensive and active parental engagement in their children's education. Most respondents noted that they enrolled their children in various classes offered in the Chinese Saturday School, a pattern common among Chinese parents elsewhere (Chua 2011). This is associated with cultural beliefs about parental responsibility and obligation for their children. Monitoring children's school performance was a parent's daily task, as in the following quote from Huang:

> In the evenings, I usually have a chat with my son, from which I know what he learned that day, and whether he understood what was taught in school. If he did not fully understand some issues, I would help him … I check his homework assigned by teachers every day, to make sure he is doing it correctly. At home, my wife and I both engage in our son's education by assigning (ourselves) different tasks. My English is better than my wife's, so I am

supervising my son with the English, while my wife helps him with the maintenance of Chinese language, including speaking and writing.

Huang had even asked his friends in China to send him a set of textbooks used in Chinese schools, with more advanced levels of knowledge than those his son used in Australia. Huang used those as supplementary resources with his son. Such intensive parental engagement in their children's education is common among single-child families in urban China. Feng's (1997) research on Chinese one-child families pointed out the multiple roles and tasks parents played, including checking homework daily, tutoring, and being a game partner as well as a companion. China's one-child policy has had a significant impact on Chinese parenting, often leading to intense pressure to succeed. But the persistence of a traditional Confucian ethic whereby learning and education is highly prized must also be factored in to Chinese parents' high expectations of their children's success in Australian schools (Welch 2013, pp. 121–2).

Intensive parental engagement in children's education is also expressed in school selection. Selecting a top-ranked high school becomes critical to securing a place in a leading university. Fan, who as noted earlier, had a teenage daughter, forthrightly expressed that he wanted his daughter to receive the best education possible in Australia. He began researching top-ranked high schools one year ahead of time. His daughter was doing well and got into an elite class in her school, but in order to further improve her daughter's marks, Fan wanted to enrol his daughter in some advanced classes in the Chinese Saturday School.

Fan's high expectations of his daughter were associated with his occupation as an educator., Intensive parental engagement in children's education, a typical feature of Chinese education models, is also prevalent among Chinese Australian parents, who often make considerable sacrifices to buy houses near desirable schools, for example, and often enrol their children in private coaching colleges. Clearly these strategies are succeeding – children of Chinese families have been found to be the most successful at gaining entry into the highly-competitive state selective schools, most notably James Ruse High school in Sydney, consistently the top-ranked school in the state, as measured by Year 12 results. While the average success rate of applicants to the top ten state selective high schools in New South Wales in 2010 was 20 %, for Chinese applicants it was 53 % (SMH 2010). Moreover, Chinese-Australian students have been shown to surpass the celebrated mathematics scores of pupils from Shanghai in recent PISA surveys (ABC 2013; AFR 2014; Feniger and Lefstein 2014).

Intensive engagement in children's education, an enduring element of the Chinese educational model, is reflected in the traditional Chinese saying, "*zi bu jiao, fu zhi guo*" [The father is responsible for his children's misconduct and wrongdoing]. Hence it is no surprise that Chinese parents in Australia are more likely to enrol their child(ren) in private coaching colleges, that promise to boost test scores, and augment chances of entering selective state secondary schools, or a fee-paying private school, perhaps with a scholarship. A recent study of PISA results showed that 40 % of Chinese heritage pupils in Australian schools attended mathematics

enrichment classes [compared to 10 % of their non-Chinese peers, and 60 % of the much-celebrated Shanghai PISA cohort] (Feniger and Lefstein 2014).

The educative and childrearing practices above highlight both continuity and change in responding to the challenges of a new social and cultural context (Shin and Wong 2013). The study supports the segmented assimilation models: immigrants both maintain core cultural traditions while imbibing influences from mainstream society. Economic and language assimilation may not necessarily lead to cultural and identity assimilation, at least for the first and second generation immigrants. The study also supports previous findings regarding the functions of social capital in childrearing and education. Chinese Saturday School and the ethnic church served multiple functions to immigrant families, both religious and psychological, but also social and cultural.

While in practice some Chinese families in Australia lay more emphasis on maintaining their language than others, the finding regarding importance of maintaining the mother tongue supports the existing literature. Tannenbaum and Howie's (2002) study of Chinese immigrant families living in Australia found that mother tongue maintenance helped maintain family stability and cohesion. Kao's (2004) study of Chinese immigrants in the USA similarly found that immigrant children with a strong sense of ethnic identity and ethnic ties are likely to have good relation with parents and perform better in schools. Agirdag's (2014) study of the long term effects of bilingualism among US immigrant students also highlighted that balanced bilingual students have significant intellectual advantages relative to mono-lingual children, including significantly higher income levels than linguistic minorities who were predominantly proficient only in English.

The trend towards low parental expectations of an economic return from their children is reflective both of influences from the mainstream society, and perceptions of a good social welfare policy in Australia (something still absent in China), and are also partly associated with the one child policy as well as their own life experience in China. Parental expectations of children tend to focus on children's well-being, rather than a higher socioeconomic achievement.

As seen in other studies, Chinese parents in Australia tend to favor strictness; some physical chastisement of children is perceived as acceptable, to cope with cultural differences, and to avoid some negative influences from mainstream society. It may also relate to cultural beliefs about childrearing that involves training, and competition for success (Chao 1994). Interviews also support previous studies showing that Chinese parents are likely to emphasize early literacy to their children and stress educational achievement more than social skills, sport, independence and autonomy (Chao 1996; Fuligni and Fuligni 2007). Also noteworthy is the role of grandparents in contributing to childrearing in Chinese culture. However, cultural values of strictness and parental control are likely to generate various conflicts between parents and their children, and for some children, such pressure may lead to some concerns about mental health (Chua 2011).

The characteristics of childrearing and educational practices among Chinese immigrants reflect the social, educational and economic status of recent Chinese migrants before and after, immigration. Contemporary immigration policy allocates preferences to those with high levels of skill, and a good education (Hugo 2014).

Education, a key index of human capital, represents values and motivation as well as resources for children's education and future success (Fuligni and Fuligni 2007). Research has consistently found that parental educational level and language proficiency are most likely to be associated with better school performances of children with immigrant parents (Abada et al. 2009; Albanese 2009). In the case of Chinese parents, the Confucian heritage, that places such a high value on learning and educational success, must also be included.

17.6 Conclusion

Educative and childrearing practices among recent Chinese immigrants to Australia highlight key changes and continuities. Migration poses a great challenge to long-standing, accepted values and practices, a challenge to which, as seen above, Chinese parents in Australia have risen very successfully. The response to this challenge has been to retain core elements of the traditional model, while adapting it in the new context. The result represents something of a hybrid model. Just as interviewees felt that it was an advantage for their children to have command of two languages, so it can be argued that familiarity with two intellectual and educational traditions can constitute an advantage, in a new and challenging cultural context. This did not mean however that conflicts were avoided, particularly between parent and children regarding language maintenance and disciplinary issues. While some parents appeared unconcerned about educational performance, both the large majority of interviewees, as well as the evidence of educational success among young Chinese Australians is broadly reflective of a strong ethic of educational performance that evokes core elements of the Chinese educational model.

Evidence for a hybrid educational model among Chinese Australian migrants is reflected in the intricate dialectic of maintenance of tradition, and adaptation to a new environment. Main elements of the former were evident in the priority attached to educational achievement and language maintenance, the high propensity to enrol children in extra (coaching) classes, and the practice of incorporating grandparents in childcare and early education. Elements of change included a lower stress on physical chastisement, indications that a child's happiness was the ultimate priority, and the lack of expectation of an economic return upon the investment in children's education (in part a response to the recognition of a more developed social welfare system in Australia). Further indications that a hybrid educational model works is arguably evident in the PISA test results achieved by Chinese Australian pupils, whose performance, as shown above, matched or even exceeded those of the much touted Shanghai cohort.

Given the skills bias in current Australian immigration policy, it is safe to say that the hybrid educational model observed above represents a relatively middle-class phenomenon; and may well also be confined, to a degree, to the first generation of immigrant parents. Regarding the former, there is considerable evidence of cultural capital among recent cohorts of Chinese migrants, although simple

transmission of cultural and social capital across borders cannot be assumed. Regarding the latter, evidence suggests that, although the Chinese emphasis on educational success, and the considerable sacrifices that Chinese families make, yields great results, especially in standardized tests of school performance, these effects may moderate over succeeding generations. Nonetheless, it remains a testament to both the resilience of both core elements of the traditional mainstream Chinese educational model, as also the adaptability of Chinese migrants, determined to adapt successfully to a new and challenging environment.

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Part III
When Theory Meets Practice

Chapter 18
The Chinese Model of Teacher Education: The Humanist Way for Chinese Learners, Teachers and Schools

Jun Li

Abstract The Chinese model of teacher education is conceptualized by critically revisiting the developmental trajectory of the teacher education system in China over a century, and re-examining current provisions and latest challenges of teacher education in China since the 1990s. It interrogates the Chinese model of teacher education with two macro lenses: the historical and the comparative. The historical lens looks deeply into the Chinese way of reform with a catch-up mentality in various stages, while the comparative lens locates the Chinese model of teacher education in an international context. The chapter conceptualizes the Chinese model or Chineseness of teacher education with four key core features: (1) the Confucian humanist way for individual and societal development; (2) the practicality of Zhong-Yong; (3) institutional openness and diversity; and (4) holistic integration of knowledge and social action. Finally, the chapter concludes that the Chinese model of teacher education with a hybrid system is likely to illuminate new pathways for the development of teacher education and the pursuit of excellence in the global community.

18.1 Introduction

The highest performance of Shanghai students in all domains of recent PISA results (OECD 2010, 2013) has astonished the globe. Worldwide attention has been paid to how Chinese learners are able to achieve such a highly competitive edge over top

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students from the rest of the world. One of the key factors, as identified by Liu Jinghai, a well-known practitioner in Shanghai, rightly pointed out that teachers are the key to the success of Chinese students and education as well (OECD 2012).

China has quested for better teacher education over the past few decades, and the recent PISA results of Shanghai students confirmed the outcomes of such national endeavors. This chapter aims at comprehensive reflections on the Chinese model of teacher education, with its implications for Chinese learners, teachers and schools. It first reviews the developmental trajectory of China's teacher education system and its new challenges under the socio-political condition of globalization, then illustrates China's recent policy actions for nurturing better teachers. Lastly, the chapter reflects on the Chinese model of teacher education with a humanist-oriented Confucianism and how it sheds light on the Chinese way of learning, teaching and schooling in a global age.

18.2 The Developmental Trajectory of Chinese Teacher Education[1]

China has a long tradition of respecting teachers and attaching importance to education, but there was no real training system for the teaching profession until the late 1890s.

18.2.1 Establishment (1897–1911)

Unlike the Western tradition, where teacher education schools were initially set up for religious purposes, the Chinese system was established for political purposes, based on the Confucian tradition that teachers are always the foundation of education for individual and societal development. The prosperity of the Qing Empire had waned steadily during the early nineteenth century, and continued to decline subsequently. With a strong catch-up mentality under the semi-colonialism, a number of politicians and educators recognized that teacher education was crucial for meeting the political goals of national survival and self-strengthening. Thanks to these political efforts, modern teacher education came into being and was institutionalized later.

The first school for training teachers in China, the Normal School of the Nanyang Gongxue (Nanyang College), was founded in 1897, which was about 200 years after the first Western normal school; the Institute of the Brothers of the Christian Schools was set up in the early 1680s by Jean Baptiste de La Salle in Reims, France.

[1] For a complete history of teacher education in China, please refer to author's new volume: Li, J. (2016a). *Quest for World-Class Teacher Education? A Multiperspectival Approach on the Chinese Model of Policy Implementation.* Singapore: Springer.

A forerunner of Shanghai Jiaotong University, Nanyang Gongxue was founded in Shanghai by Sheng Xuanhuai (1844–1916), as an institute for teacher education and was the first school for training professional teachers in modern China (Education Compilation Committee 1948, p. 909). On May 21, 1902, the first independent normal school, Hubei Normal School, was founded by Zhang Zhidong (1837–1909) (Chen 1981, p. 117). Later in the same year, the first private normal school, Tongzhou Private Normal School, was founded by Zhang Jian (1853–1926) in Nantong, Jiangsu Province (Liu 1984, pp. 7–8). In addition, Jingshi Daxuetang, the first modern national university founded by the late Qing government in 1898, opened an institute for teacher education in 1902.

In 1902, an independent teacher education sub-system was included in the first national educational legislation *Renyin Xuezhi*, which aimed to create a modern school system based on the model borrowed from Japan. During this period, China's first national licensing system for elementary school teachers was established by the Ministry of Education (MOE) in 1909, and in the following year a similar licensing system was further adopted for teachers of lower and normal and middle schools (Kuo 1915, p. 158). Moreover, girls' normal schools were formally opened in 1907. By the same year, there were 271 normal schools and 282 teacher training institutes with a total number of 36,608 students and 36,974 certified teachers (The MOE Bureau of General Affairs 1907, pp. 13, 23–24, 50–51).

18.2.2 Institutionalization (1912–1949)

Shortly after the Republic was established, the new administration passed several pieces of legislation regarding the school system in the early 1910s. Two of these, issued in 1912, *The Teacher Education Act* and *The Normal School Regulations Act*, guided the objectives, programs and curricula for teacher education. Through such new regulations, teacher education was instituted at two levels: normal schools for elementary school teachers, and normal colleges and universities for secondary school teachers. Normal schools were provincial while normal colleges and universities were either provincial or national. A district system for normal schools was set up in 1912 for the first time in China's history, in order to respond to various local circumstances, followed by a licensing system for elementary school teachers on April 28, 1916 (Sun 1971, pp. 530–533). These initiatives for teacher education were revolutionary and effective in terms of providing new visions of teacher education programs and institutions.

Renxu xuezhi, the new legislation which was passed on November 1, 1922, radically shifted from the Japanese model of the school system to the American one. This model was characterized by flexibility and adaptability to various local conditions, a 6-3-3 system with education levels tailored for different stages of students' development, and distinctive secondary schools (Qian and Jin 1996, pp. 284–300). Under the new legislation, teacher education was planned at two levels: normal schools, and normal colleges and universities. For elementary schoolteachers,

normal schools were generally merged into comprehensive secondary schools. Some provinces began to stop providing subsidies for students enrolled in normal schools, resulting in a decline in enrollment in teacher education. Normal colleges and universities were still positioned as independent institutions on paper. In practice there was only one teacher education institution, the Beijing Higher Normal School; other higher teacher education institutions were merged into comprehensive universities. Although the 1922 legislation was praised as a milestone in modern China's educational history for its flexible school years, operational adaptability and profound influence, teacher education was actually undermined (Sun 1971, p. 539). Liu (1984) documented the fact that from 1922 to 1928 the number of "normal schools was reduced by 63 %, student numbers declined by 49 %, and budgets were cut by 34 %" (p. 54).

From 1932 to 1935, the Nationalist Government made great efforts to restore the pre-1922 system of teacher education. Normal schools were removed from comprehensive secondary schools, and some higher education institutions became independent normal colleges and universities for training teachers again. But the sociopolitical context changed dramatically from 1921 to 1949, with a succession of wars breaking out in China. While the country underwent these bitter hardships, the modern teacher education system thrived. By 1946 the number of normal schools had almost tripled to 902, and the number of students increased five-fold to 245,609 (The Editorial Board of *Educational Almanac* 1948, pp. 929–930).

18.2.3 Re-Institutionalization (1949–1993)

The People's Republic of China was founded in 1949, and the new government dreamed of eliminating illiteracy and providing universal education for all school-aged children in the shortest time possible. Teacher education was immediately re-established and was made one of the nation's priorities, in order to catch up with such Western powers. Given the sociopolitical circumstances, the Soviet model of teacher education was adopted, and remained in place for more than two decades thereafter (Chen et al. 2003, p. 7; Pepper 1996, p. 149). With this model, China relied solely on an independent teacher training system, and teachers were exclusively prepared by normal schools, normal colleges and normal universities, with provincial or regional colleges of education providing in-service education for teachers. By 1953, there were a total of 31 independent normal colleges and universities nationwide (China National Institute for Educational Research 1984, pp. 90–91).

The national policy on "the reorganization of colleges and departments" brought tremendous changes to the teacher education system in the mid-1950s. For example, East China Normal University was founded in Shanghai in 1951 on the basis of several private universities, by merging the departments of education from Fudan University, Aurora University, Datong University, St. Johns University, and Shanghai University. Although departments of education had been integrated within

comprehensive universities during the Nationalist period before 1949, they were now affiliated solely with the newly established or combined normal colleges and universities.

For political reasons, education was deeply mingled with politics during this time. Since the late 1950s, the Communist government repeatedly claimed that education must serve proletarian politics. Teacher education, like all other fields, was also deeply involved in politics while its other functions were largely neglected or hampered. In addition, the profession of teaching suffered tremendous criticism and teachers' sociopolitical status declined significantly.

In 1978, with the adoption of the reform and open door policy in order to modernize the country, China's teacher education began to recover, entering a period of radical transformation. In 1983, elementary and secondary schoolteachers were required to complete a secondary teacher education program, a 2–3-year postsecondary teacher education program, and a 4-year college-level teacher education program, respectively. In addition, all national policy actions, such as the *Opinion on Strengthening and Promoting Teacher Education* in 1978, the *Communist Party Central Committee's Decision on Reform of the Educational System* in 1985, the *Opinion on the Plan for Basic Education Teachers and Teacher Education*, and the *Opinion on Strengthening and Promoting Teacher Education* in 1986, asserted that teacher education must be the first priority of education development. Furthermore, in order to create favorable circumstances for teachers and teacher education, the first National Teachers' Day since 1949 was instituted on September 10, 1985 as a symbol of respect for the profession. Since then, National Teachers' Day has been celebrated every year. These policies and strategies helped restore the key functions of the teacher education system, and provided possibilities for future reform.

18.2.4 Professionalization (1993–Present)

Since the early 1990s, Chinese leaders have embraced a sweeping wave of reforms, including marketization, privatization and decentralization, pressured by the intensifying process of globalization. For example, in pursuit of modernization and to catch up with developed countries, the new round of education reform aims to expand education at all levels while maintaining or improving quality. The rapid expansion of compulsory education and postsecondary education has generated an urgent demand for highly-qualified teachers. The Soviet model of an independent teacher education system no longer meets the demand for a stronger and larger teacher workforce. The national campaign for quality education demanded a process of professionalization of teachers. To respond to these challenges, Chinese policymakers have initiated a retooling of the teacher education system, seeking overall structural adjustment and improvement, as part of restructuring the higher education system based on the reform strategies for decentralization of the economy and governance. The goals are to give teacher education a new status and bring about the improvement of educational qualifications for new teachers, the

establishment of continuing education for teachers, and remarkable improvement in the overall quality of the teacher workforce (MOE 2002). The goals of the policy action are to produce enough better teachers and to professionalize the teaching workforce; to reform and diversify the teacher education system; and to continuously improve teachers' economic and social status.

During this period, the *Guidelines for China's Education Reform and Development* were put into policy action in 1993 (Communist Party of China Central Committee and State Council of the People's Republic of China 1993, and the *Law of Teachers of the People's Republic of China* was enacted on October 31, 1993, signaling a new era of teacher education reform. Furthermore, the *Ordinance of Teacher Qualification* in 1995 requires all teachers must obtain at least one of seven licenses to teach (State Council 1995). In 1996, the *Opinion on the Reform and Development of Teacher Education* re-envisioned a teacher education system that is chiefly reliant on independent normal colleges and universities, with some participation from comprehensive universities (State Commission of Education 1996). This renewed vision has charted a confirmed direction for the restructuring of the teacher education system that includes players such as non-normal higher education institutions. A new vision and key initiatives have been highlighted for teacher education development in three important policy documents, i.e., the Communist Party of China Central Committee and State Council's *Decision on Deepening Educational Reform and Bringing forth Quality Education in an All-round Way* in 1999, the *Tenth Five-Year Plan for Education* in 2001, and the State Council's (2010) *Guidelines for Mid- and Long-Term Educational Reform and Development 2010–2020*. Specifically, the 2010–2020 guidelines have ensured the importance and moral standards of teacher professionalism enhanced by continuously raising the social status of the profession. They can be seen as rooted in a Confucian epistemology that synergizes professional knowledge and ethical principles of teaching, which was inherited at the time when the modern system of teacher education was first established by the late Qing Empire a century ago.

18.3 Current Provisions and Challenges[2]

There are a variety of schools, colleges and universities preparing teachers at different levels in China. Generally, teacher education denotes two major forms of education for teaching at three professional levels. The first is the pre-service teacher education at the levels of normal schools, colleges and normal universities. Then there is the in-service teacher education at county level teachers' schools, prefectural and provincial level colleges of education. Among these regular teacher education institutions are six major forms: normal universities, colleges and schools,

[2] More details can be found in author's new volume: Li, J. (2016a). *Quest for World-Class Teacher Education? A Multiperspectival Approach on the Chinese Model of Policy Implementation*. Singapore: Springer.

provincial colleges of education, prefectural colleges of education and local teacher schools. In addition to the six forms of teacher education, more and more comprehensive universities are actively participating in teacher education programs. For example, by 2004, 315 comprehensive universities have set up teacher education programs, enrolling a total of 480,000 students (Editorial Board of *The People's Republic of China Yearbook* 2005, p. 752). Meanwhile, the National Network of Teacher Education and internet-based programs have also played an important role in preparing teachers since their advent in recent years.

With a diverse array of teacher education institutions, in 2012 there were around 0.52 million students studying in regular teacher education institutions. Teacher numbers increased from 8.6 million in 1990 to 10.7 million in 2012 and the quality of the teaching profession reached a new level. For instance, the educational qualification rates of elementary and junior secondary schoolteachers jumped up to 99.8 % and 99.1 % in 2012 from 73.9 % and 46.5 % in 1990, respectively (The Editorial Board of *The People's Republic of China Yearbook* 1991, p. 349; 2013, p. 636). There are challenges down the road. One of the challenges for teacher education is the dramatic demographic change in China. Due to the success of the government's policy to limit every family to one child, enforced since 1978, the number of new born babies has steadily declined following a population peak in the late 1990s. The rapidly declining number of school-aged students in elementary schools has shifted the focus of China's elementary education system from increasing the number of qualified schools and teachers to improving the quality of the teaching profession. On the other hand, for secondary schoolteachers, while quality is a more serious issue, there is also a huge demand for teachers, posing dual challenges of quality and quantity for teacher education reform.

Since the Chinese government launched a new round of teacher education reform in the 1990s, several key trends of development are observable here. Firstly, the closed, independent teacher education model in China has been turned into an open, hybrid system. Alongside these institutional changes, *jiaoshi jiaoyu* (teacher education) has replaced the old discourse of *shifan jiaoyu*, literally "teachers" and "role models", which used to refer to pre-service teacher education only, exclusive of in-service teacher education. Secondly, the MOE now requires elementary schoolteachers to receive higher qualifications from two- to three-year junior normal colleges; all teachers in secondary schools are required to hold Bachelor's degrees. Thirdly, new programs and teacher education degrees have been established to achieve excellence in terms of teacher quality. Master of Education has been established since 1996 for elementary and secondary schoolteachers. Fourthly, a new licensing system and professional standards for the teaching profession, and the national curricular standards of teacher education, have all been fully and consistently operated with standardized procedures, legislative requirements and measurements, and wide participation. Fifthly, teacher education systems have adopted new forms, such as the National Online Network for Teacher Education. Finally, fundamental to the above trends is the unchanged focus on the deep integration and synergy of professional knowledge and ethical cultivation of teaching in the provision of teacher education programs, as highlighted repeatedly in key policy

documents. The focus is inherited from a Confucian epistemology that emphasizes knowledge for the human good and its applications to the social life world.

18.4 The Chinese Model of Teacher Education

In retrospect and with reflection on a lengthy history, it is observed that Chinese teacher education has gone through a bumpy and sometimes awkward trajectory, with a strong catch-up mentality for societal development, nation-building and the attainment of a global status. The following observations are evident about the Chinese model of teacher education and its humanistic implications for Chinese learners, teachers and schools.

18.4.1 The Confucian Humanist Way for Individual and Societal Development

Core to the Chinese model is the humanist way of Confucianism that always places high importance on learning, teaching and schooling in individual and societal development. The purpose of learning, teaching and schooling has been historically defined by Confucian humanism as "to let one's inborn virtue shine forth, to renew the people, and to rest in the highest good," as stated in *Daxue* (*The Great Learning* n.d., 1.1), showing a harmonious integration between the individual good and the public benefit of society (Lee 2000, pp. 10–11). Education has thus been the first priority in any political agenda, as made explicit in the *Xueji* (*The Theory of Education*), one part of *The Book of Rites* in the *Five Classics*. This belief in the importance of learning, teaching and schooling has been deeply imbedded in Chinese culture over the past 2000 years, where the Chinese model of teacher education is grounded.

Concomitant with the high importance given to education in traditional Chinese society, teachers are usually given the most respected socio-political status. Teachers are important cultural symbols in Chinese societies, such as Hong Kong, Mainland, Macau, Singapore and Taiwan, while at the same time there are very high expectations of their performance. Xun Zi (313–238 BCE), a Confucian philosopher and reformer of the third century BCE, dictated teachers as on the same level as sovereigns and made the point that teachers must be respected if the nation is to rise (*Xun Zi n.d.*, 27). Later in the Tang Dynasty, Han Yu (768–824 CE) depicted the responsibility of the teacher as encompassing the following three roles – transmitting moral values and principles (*chuandao*), delivering knowledge and skills (*shouye*) and solving the doubts that arise in learning (*jiehuo*). The concept of the teacher as knowledge transmitter, role model and puzzle solver is deeply implanted in the Chinese model of teacher education.

Confucianism foregrounds the moral relationships of individuals or groups in a societal context, offering an East Asian way of life, which central framework views each individual as equally perfectible for love, justice and development (Li 2015). Furthermore, Confucianism believes that the role of teachers combines that of knowledgeable scholar, artistic and caring professional and responsible public intellectual, and that education is always a priority, both for individual cultivation and for national strengthening and societal development (Hayhoe and Li 2010). To ensure this priority, the teaching profession has been seen as the core to providing educational service for both the public and the private good. The education and development of teaching professionals are commonly recognized as the key to the success of basic education and student learning. Thus it is not surprising that the Chinese model of teacher education represented by normal universities has endured throughout various times over the past century, and in the new global age it has become even stronger.

18.4.2 The Practicality of Zhong-Yong

The Confucian humanism of the Chinese model is not merely a philosophy of idealism, but also a pragmatic orientation for policy action and social transformation, as demonstrated by Confucius himself throughout his whole life as a master educator. Such an orientation can be illuminated by *Zhong-Yong*,[3] a Confucian wisdom of the Golden Mean (Lin 1939). Literally, *Zhong* means central, proper, right or just; and *Yong* carries the meaning of ordinary, mediocre, pragmatic or universal (Ku 1906, p. 7). To secure *Zhong* (the Mean) and *Yong* (the Normality) is not merely to pursue a middle course, but involves a spirit in which humanity and rationality reach a perfect harmony. In fact, *Zhong-Yong* can serve as "a guide for human emotions and actions" (Chai and Chai 1965, p. 305). Fundamental to the two principles are Confucian values based on pragmatism which is balanced in a collective rationality and ethical commitments for individual and social development, through which harmony and peace are reached and attuned in ways that overcome the tensions between ideals and realities.

To give an example, *Zhong-Yong* is applied as "Chinese learning as essence and Western learning for its practical utility" (*zhongxuweiti*, *xixueweiyong*), which is rooted in Confucian epistemology (Hayhoe and Li 2010; Li 1998, 2009; Li and Hayhoe 2012). The orientation was coined by the late Qing incrementalist Zhang

[3] The Confucian philosophy of *Zhong-Yong* is a quite complex concept, and I have recently elaborated it in various occasions. Li, J. (2016a). *China's Quest for World-Class Teacher Education? A Multiperspectival Approach on the Chinese Model of Policy Implementation*. Singapore: Springer; Li, J. (2016b, forthcoming). China's reform of teacher education institutions: A critical case study of policy implementation; and Li, J. (2015). When Confucianism meets Ubuntu: Rediscovering justice, morality and practicality for education and development. *International Journal of Comparative Education and Development*, *17*(1), 38-45.

Zhidong (1837–1909), the founder of the first independent normal school in China in 1902 (Chen 1981, p. 117), based on concepts he drew from Zhu Xi (1130–1200). The second example is to be inclusive in adopting new rationale for the reform of teacher education, including modernization and human capital theories (Li and Lin 2008). The third example is to keep the unique institutional identity of normal universities in the 1990s, when there was an intense, nationwide debate over whether they should retain their historic identity or take the designation of comprehensive universities. It was finally decided that normal universities bore a special responsibility for setting high standards for teachers and gave the profession a high profile nationally; therefore they were not to follow the nationwide trend of merger that was affecting many comprehensive universities in China that time, but required to maintain their unique standing as normal universities: "Education is the best hope for revitalizing the Chinese nation, and the hope for revitalizing education lies with teachers," concluded Chinese policy makers (Ashmore and Cao 1997, p. 70).

The practicality of *Zhong-Yong* is evident in the ongoing reform of Chinese teacher education in recent decades, which is a pragmatic policy choice through which both the quantity and quality of teacher supply and development have become priorities of China's agenda for individual cultivation, social development, nation-building and international competitiveness in the context of intensified globalization. The Chinese model has never been satisfied with a utilitarian orientation, but always extended its ideals to the moral development and transcendence of individuals and society as a whole. The Confucian practicality of *Zhong-Yong* balances the extreme swings of the pendulum in teacher educational reform and development, between short-sighted instrumentalism, on one hand, and a purely idealized utopia, on the other.

18.4.3 Institutional Openness and Diversity

Institutional openness and diversity are two other core elements of the Chinese model of teacher education, centered in Confucian *Zhong-Yong*. The Chinese system has been very accommodative at various historical stages since its birth in 1897, when the Japanese model was introduced to China. The Japanese model was mainly based on the French model which had an independent status in its political system.[4] It was a model that ensured teacher education would have a stable status and be a reliable instrument for teacher supply, social development and nation-building. In the 1920s to 1930s, the Chinese system began to shift to an American model which virtually relied on comprehensive universities and within which teacher education lost its unique identity. A Soviet model based on the French model was adopted

[4] The French model is arguably French, in terms of its origin of institutionalization. As the author speculates, the French model may have some historical roots from China. See Li, J. (2012). World-class higher education and the emerging Chinese model of the university. *Prospects: Quarterly Review of Comparative Education*, *42*(3), 319–339.

after 1949, due to limited international resources available to the newly born Communist regime, and it worked very well when China's population started to boom in the 1970s to 1980s. Now, however, the Chinese model is an open and inclusive system with hybridity which continues with the French tradition but incorporates elements of the American model. Throughout the last century, the Chinese model has been very open, adaptive, flexible and diverse in accommodating international experiences from other systems, with a Confucian pragmatism that can be illustrated by phrases such as "stones from other hills serving to polish the jade of this one."

18.4.4 Holistic Integration of Knowledge and Social Action

Last but not least, the Chinese model of teacher education is grounded in Confucian epistemology that sees professional knowledge of education as humanistic and holistic and sees its ultimate purpose as for nothing else but individual and public good. The application of such knowledge, on the one hand, is seen as the main test of its validation, rather than logic and theoretical proof, as in the European tradition (Hayhoe and Li 2010). In practice, professional knowledge of education is seen as a powerful instrument for the development and better-off of individual life and the general public. Additionally, professional knowledge and ethical standards are always placed in the center of teacher education provision, especially the integrated curricula of professional learning and practices, as mandated by policy documents for teacher education reform. In this way, the Chinese model has kept excellence and diversity as its top priority for institutional development and system change. With this Confucian tradition of epistemology, the Chinese model locates itself in the state system and invites government involvement and intervention so that teacher education can be best made use of as a fundamental instrument for individual and public good, while its own autonomy and academic standards are ensured and enhanced. It is in this Confucian sense that teacher education has been always placed as the highest priority in educational reform in the contemporary history of China.

18.5 Implications for Chinese Learners, Teachers and Schools

The four core features of the Chinese model of teacher education manifest themselves in the Chinese way of learning, teaching and schooling, providing institutional explanations for the phenomena of Chinese learners, teachers and schools, or simply the Chineseness of education, which has been explored widely since the end of last century (e.g., Chan and Rao 2009; Hayhoe 2015; Li 2001; Kwo 2010; Watkins and Biggs 1996). A recently typified image of the Chinese tiger mother or

lion teacher (Chua 2011) has further stirred up worldwide debates in the educational community and more broadly.

These observations on the Chineseness of the educational phenomena, however, have never been examined through the Chinese model of teacher education. For example, Lee (1996) summarized several key features of Chinese learning, teaching and schooling, such as the significance of education, educability and perfectibity, will power and motivations of learning, reflective process of inquiries, etc. The interpretations provided thus far tended to be limited only on the Chinese socio-cultural context, instead of more comprehensively looking into such other institutional factors as the Chinese model of teacher education that also plays an important role.

Among many roles played by the Chinese model is the prestigious status of teachers as well as normal universities. The Confucian way of learning has always placed high importance on teachers and schools where learning and teaching are regarded historically as an inclusive, integrative and holistic process, as explicitly elaborated in the *Xueji*, one classical Confucian essay of *Liji* (*The Book of Rites*) written 2000 years ago:

> The ancient kings, in establishing their states and governing their people, placed teaching and learning (schooling) as the first priority….
>
> When one knows her or his inadequacies, only then can one examine one-self. When one knows her or his limitations, only then can one strengthen oneself. Therefore it is said: Teaching and learning complement one another. The *Mandate to Yue* states: "Teaching and learning are each half". This is what it meant here.…
>
> Having understood the causes of the success of teaching, as well as the causes of its failure, a gentleman is qualified to be a teacher….Having understood what is difficult and what is easy in learning, as well as what is the difference of potential and capacities, a gentleman is then able to teach heuristically. When he can teach in this way, he is then qualified to become a master.[5]

Carrying on this Confucian tradition, teacher education institutions in China, as well as in other societies in the East and South Asian Region, especially normal universities as a specialized type of higher education institutions, have consistently enjoyed the same academic and institutional status as comprehensive universities. The culturally recognized Confucian values of learning, teaching and schooling have been institutionalized to a great extent through the Chinese model of teacher education over time, which has had profound impact on Chinese learners, teachers

[5] The translation here is mainly mine, with adaptations from the following references: Chai, C., & Chai, W. (1965, trans. & eds.). *The humanist way in ancient China: Essential works of Confucianism*. New York: Bantam Books, Inc.; Gao, S. L. (2005). *Xueji yanjiu* [*A study of Xueji*]. Beijing: People's Education Press; Gao, S. L. (1982). *Xueji pingzhu* [*An annotation of Xueji*]. Beijing: People's Education Press; Wong, W. S. (1976). *The Hsüeh Chi*, an old Chinese document on education. *History of Education Quarterly*, 16 (2), 187–193; and Xu, D., & McEwan, H. (2016). *Universal principles for teaching and learning: Xue Ji in the 21st century*. Albany, NY: SUNY Press.

and schools. The Chineseness of educational practices is widely perceivable not only in Confucian heritage societies such as Mainland China, Hong Kong, Japan, Korea, Macao, Malaysia and Taiwan, but in Chinese communities in Western countries like Australia, France, Germany, the U.K. and the U.S.

18.6 Concluding Remarks

The Chinese model of teacher education is naturally not static. Rather, it is vibrant, adaptive and variable, may take different forms in different contexts, and can suggest new pathways for both developing and developed countries in the future. It may serve as an alternative form of teacher education for other contexts in a global age. In the 2000s, schools in the U.S. began to suffer a severe shortage of qualified teachers. One of the reasons is that the teacher supply, mainly provided by comprehensive universities, is insufficient, unstable and unresponsive. To tackle this problem, an open system with hybridity like the Chinese model with normal colleges and universities may be helpful, if this specialized type of higher education institution for teachers can be revived on American soil. In the Philippine context, there has been a hot, nationwide debate about whether normal universities in the country should be transformed to follow the American model, i.e., teacher education being mainly provided by comprehensive universities. Fierce arguments have focused on whether the three remaining normal universities in the Philippines should be configured into comprehensive universities. The Chinese model provides an alternative answer with an indigenous system based on its own socio-cultural tradition and societal needs. In Hong Kong, conservatism has resulted in a refusal to give the main institution of teacher education the status of university, ignoring both the valuable model of normal universities developed in mainland China over the period of a century and the alternative models of universities of education that first emerged in neighboring countries such as Japan, Korea and Vietnam.

It is obvious that the Chinese model of teacher education, with its core features of humanism, openness and diversity rooted in Confucianism, can provide alternative ways of thinking about the reform and change of teacher education in the global community. With a lengthy legacy and rich characteristics of its own, the Chinese model of teacher education is likely to contribute, in vibrant and dynamic ways, to the world in the future, with its rich and unique Chineseness.

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Chapter 19
Deweyan Student-Centered Pedagogy and Confucian Epistemology: Dilemmatic Pragmatism and Neo-Patriotism?

Gulbahar Beckett and Juanjuan Zhao

Abstract Drawing on empirical data collected for three separate studies in secondary school contexts in Canada, U.S., and Northwestern P.R.C, this chapter discusses how Deweyan student-centered pedagogy transpires in Confucian epistemological contexts. It illustrates the experiences and perceptions of secondary school immigrant students from Hong Kong, P.R.C., and Taiwan studying in Canada and their Canadian teachers; American high school students and their Chinese teachers; and northwestern P.R.C teachers. The chapter extends the traditional comparative education work further by showing the complexity of shifting practice and mixed philosophies that require consciousness raising, negotiation, and practical support. Through the examination of the clash and conflicts between Chinese Confucian teacher-centered pedagogical belief and American/Canadian Deweyan student-centered pedagogical belief, it speculates a new Chinese educational model that could be identified as dilemmatic pragmatism and neo-patriotism that stretches neoliberal global competition to include exertion of intellectual knowledge influence maybe emerging in this global era.

19.1 Introduction

Globalization intensified migration of people, pedagogical practice, and philosophies in search best practice to maximize return for educational investment efficiently. For example, according to Institute of International Education Open Doors (2013), in 1998–1999 academic year, P.R.C became the leading sender of students to the U.S, with the number of students totaling 194,029 in 2011–2012 academic

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year. The number increased to 235,597 during the 2012–2013 Academic Year, an increase of 21.4 % from the previous year. 39.8 % of these were undergraduate students, 43.9 % of them were graduate students, 16.3 % of them fell into other categories such as Optional Practical Training. Many of those students chose to work in the U.S. after graduation in various fields, including education. P.R.C is also the number one country that sent its secondary school students to the U.S., the number of which counted for 32.3 % (n = 23,562) of overall international secondary and postsecondary students in the U.S. in 2013 (Farrugia 2014). How international students' perspectives and preferences of teaching and learning interact with American education system and culture is certainly an interesting and important issue that deserves serious exploration. P.R.C has even "imported" the pedagogical practices of these countries, Deweyan student-centered pedagogy, through its recent curriculum reform in the P.R.C, for broader introduction of it to many more students and teachers (see Beckett and Zhao in press). Globalization has also contributed to economic growth of countries such as P.R.C. to the degree that they are no longer content with unidirectional learning from western countries and are working towards introducing their knowledge to western countries by "exporting" knowledge (Feng et al. 2013) with initiatives such as Chinese language teaching through Confucian institutions and Chinese as a Foreign language teaching in school contexts (Zhao and Beckett 2014; Zhao in progress).

Drawing on empirical data collected for three separate studies in secondary school contexts in Canada (Beckett 1999), U.S (Zhao and Beckett 2014; Zhao in progress), and Northwestern P.R.C (Beckett and Zhao in press), this chapter discusses how Deweyan student-centered pedagogy transpires in Confucian epistemological contexts. Specifically, it illustrates the experiences and perceptions of secondary school immigrant students from Hong Kong, P.R.C., and Taiwan studying in Canada and their Canadian teachers; American high school students and their Chinese teachers; and northwestern P.R.C teachers.

19.1.1 Significance

Unlike traditional comparative education work that stops at superficial comparison of eastern and western practices, this chapter discusses what happens when pedagogical practices clash with epistemological perceptions and discusses the philosophical rationale for different practices and perceptions. As such, it shows the complexity of shifting practice and mixed philosophies that require consciousness raising, negotiation, and practical support. Through the examination of the clash and conflicts between Chinese and American/Canadian pedagogy, it speculates a new Chinese educational model that could be identified as dilemmatic pragmatism and neo-patriotism maybe emerging in this global era.

19.1.2 Definitions

Deweyan student-centered pedagogy refers to experiential and interactive curriculum where students are provided opportunities to be part of their own learning, where their interests and experience are taken into account (Dewey 1938). It is about cultivation of individuality, acquisition of skills and techniques by working through educational activities that are of direct and vital importance to learners. For Dewey, the aim of education is to prepare for changing world by helping students learn how to learn (Dewey 1938). As the 77-page definition and discussion of epistemology by Stanford Encyclopedia of Philosophy indicates, much can be written about *epistemology*. For the purpose of our discussion in this chapter, we definie *epistemology* as the theory of knowledge and justified belief (Winch and Gingell 1999). Likewise, a thorough discussion of Confucianism is beyond the scope of this chapter, where *Confucian epistemology* refers to philosophy and theories developed from the Confucian tradition, which reflects and affects people's beliefs and practices, in particular with education in this chapter. Confucian epistemology is an understanding and articulation of inhered cultural legacy as well as transmitting of wisdom and knowledge from classics (Zhao 2014); teaching and learning of moral cultivation (Zhao 2013); and proper attitudes and behaviors in social relations (Rošker 2014). Teaching under Confucian culture is considered more teacher-centered with teachers holding an authoritative role, passing down knowledge and information to students (Zhao 2013). *Dilemmatic pragmatism* in this chapter refers to the choices individuals such as students and teachers make pragmatically and in the context of a dilemma because the choices clash with their philosophical beliefs. For example, Chinese teachers who subscribe to Confucian teacher-centered pedagogical philosophy could make dilemmatic choice of adjusting to Deweyan student-centered pedagogical philosophy and practice for pragmatic reasons such as keeping their jobs. *Neo-patriotism* refers to the current Chinese patriotism that stretches neoliberal global competition to include exertion of intellectual knowledge by "exporting" knowledge (Feng et al. 2013) that some (e.g., decision making) P.R.C citizens deem necessary for the rest of the world to learn. Such neo-patriotism is reflected in Chinese government's funding of Chinese language programs in the U.S and other countries and the many Chinese teachers' journey to those countries to "spread Chinese language and culture" (Beckett and Li 2012) as a way to compete for global standing.

19.2 Practice to Theory

19.2.1 Evidence from Practice

19.2.1.1 Case 1: Perceptions of Chinese Students Towards Project-Based Instruction

Beckett (1999) ethnographically explored implementation of project-based instruction, a typical Deweyan educational model, in English as a Second Language (ESL) classes in a Canadian secondary school. The participants of the study included three Canadian teachers and 73 students of Chinese heritage from P.R.C (n = 2), Taiwan (n = 46), and Hong Kong (n = 25) at the time of data collection. While the participants were predominantly from Taiwan and Hong Kong, they are referred to as Chinese students whose perceptions are relevant to the issues under discussion because they shared common Confucian educational beliefs and experiences with their peers from P.R.C. According the teachers and school Handbook, project-based instruction model was introduced to ESL classes to help familiarize ESL students with this common educational activity in Canadian educational culture and therefore a part of Canadian-born students' repertoire. Specifics goals for the projects included teaching English language holistically through authentic tasks in real-world context, challenging students' creativity, fostering independence as well as group work skills, critical thinking skills, and enhancing decision-making skills. Classroom observation and analysis of students work suggested and teachers confirmed that, by choosing, designing, carrying out, and reporting their projects, those students achieved the project goals. Analysis of the data also suggested that students learned English language by listening to, speaking, reading, and writing through data gathering, analysis, synthesis and oral as well as written project reports. Additionally, they learned library skills and computer skills as well as social skills through their on campus and down-town library searches which included getting and interpreting directions by speaking to native English speakers on route and in the libraries and computer assistants. Interviews with teachers confirmed these findings and revealed that students learned much through project-based learning and met the goals set for them. Teachers were pleased that students were able to learn English holistically by carrying out authentic projects in real world contexts, rather than through separate skills based teacher-centered English listening, speaking, reading, and writing classes.

Analysis of interview data, however, revealed that 18 % of the students agreed that project-based approach to English language learning is a good model because it helped them improve their English by learning it through authentic activities in fun manner rather than falling asleep by reading boring textbooks. They acknowledged that the model helped them learn computer and research skills and feel a sense of accomplishment. Students also felt the work they did for their project contributed to improving their reading and writing skills. Twenty-five percent of the participants reported having mixed feelings about project-based learning stating

that while they learned much through project-based approach, they had difficulty knowing exactly what they learned and therefore longed for the traditional method of learning ESL they had in their home countries. They wished they learned from teachers more rather having to learn from peers through group work and that they learned fewer and "more important information" (facts) from prescribed texts rather than learning much through other sources.

A majority (57 %) of the 73 students reported not liking project-based approach complaining that projects require too much time learning things that are irrelevant at the expense of basic knowledge acquisition. The students understood that the goals for project-based learning included fostering critical thinking, but believed that critical thinking is job of adults, not students ("children" in the participants' own words) like them. They said that teachers should teach from textbooks and that group work is a waste of time as peers have little to contribute to their learning. They said that ESL should be taught separately in ESL reading, ESL writing, ESL speaking, and ESL listening classes, not through Social Studies, English Literature, and Science, as was done at their Canadian school.

In summary, the students participated in this study learned much Social Studies, Science, ad English Literature content knowledge and various skills as well as English language by listening to and speaking with their teachers, librarians, and with each other about their projects; by reading widely to research for their projects, and by presenting their research orally and in writing. Additionally, they learned how to learn through project-based instruction that their native born Canadian peers were used to, achieving all the goals their teachers set for them. The student participants acknowledged that they learned much, but still wished that their classes were organized into skills areas such as English composition, Listening, Speaking, and Reading classes and wished that their teachers taught more from textbooks, as how things worked in their home countries. As Beckett (1999) pointed out, while the desire to have separate English language skills courses may be explained from a linguistics perspectives whereby teachers engaged their students in content-based language learning from a systemic functional linguistics perspective that sees language as meaning-making resource (Halliday 1994) while the students held formal linguistics perspective that sees language as linguistic forms such as words, phrases, grammatical structures that are usually taught in bits and pieces separately. The linguistics perspective, however, does not explain students' complaints about not having had more authoritative teaching from the textbooks by their teachers, which maybe explained from a Deweyan student-centered versus Confucian teacher and authoritative text-centered perspective. This will be elaborated in the discussion section of the chapter under Uniquely Chinese and Confucian vs. Western and Deweyan subheading.

19.2.1.2 Case 2: American Students and Chinese Teachers

Zhao (in progress) conducted an ethnographic case study for her dissertation examining Chinese language teachers teaching in American high schools to understand their perspectives and practice in a cross-cultural setting. Participants in the study included teachers from Mainland China and Taiwan. Preliminary findings of interviews with 23 teacher participants and a year-long observation of five teachers revealed many challenges faced by Chinese teachers in all aspects of their teaching due to differences in Confucian Chinese educational and cultural models and the Deweyan American educational model and social cultures. All of the teacher participants stated that applying Chinese ways of teaching did not work in U.S. classrooms. Most of them admitted that they had high expectations for students, expecting them to put efforts into studying both in and outside class and emphasizing strongly on students' grades in relation to their learning. For example, some teachers reported that during the first year of their teaching, they used to assign more homework than what they do currently. They also lectured most of the time with a few or no activities, as they wanted students to get more information from their lessons. Teachers reflected that the application of Chinese ways of teaching was very common at the beginning of their teaching career in the U.S. As a result, students were found not highly motivated or actively engaged in learning. Some of them even became resistant to the instructions. Chinese teachers' expectation of students' high motivation and demand for their academic achievements, "does not really match with American education that values all rounded development of its students", according to one teacher.

Applying the Chinese model of teaching with a strong emphasis on textual learning and knowledge input not only bores students, but can also cause classroom management issues, which affects student-teacher relationship negatively. Using an action research approach, Zhao and Beckett (2014) implemented Deweyan project-based instruction (PBI) in teaching Chinese as a foreign language in an American high school. In the middle of the first semester, the instructor noted behavioral issues and later found it was because students lost interest in the curriculum and felt bored with the class format, which was mostly about lectures and exercises. The teacher thus applied PBI as an intervention to get students more engaged in learning. Based on interview and survey data collected from nine students, it was found that PBI, as a student-centered pedagogy, motivated students, enhanced their cultural knowledge and communicative competence. It provided students space to use the language rather than just memorize vocabulary and grammar rules. All of the students agreed that they enjoyed doing projects and referred to it as fun breaks from their repetitive school work. Students stated that projects gave them the opportunity to do something fun and creative, which then added to the diversity of their class format. The majority of the students reported that doing projects offered insights into their personality by connecting their interests. The instructor was also able to rebuild her relationship with students through collaborating and facilitating the project works.

As the teacher in Zhao and Beckett (2014) study did, after teaching in U.S. classrooms for a while, Chinese teachers began to adjust their pedagogy to better suit the needs and interest of the students, although the shift is not an easy one and requires constant consciousness raising and adjustment (Zhao in progress). In discussing their difficulties in transitioning into more student-centered Deweyan American pedagogy, teachers said it was because Chinese model of teaching is more towards teacher-centered versus student-centered in American teaching. The teachers became appreciative of and developed preferrance for student-centered teaching that recognizes students' learning styles and diversity as well as addresses their interests and needs. They believed that through student-centered pedagogy, students acquired knowledge by doing while enjoying the learning process. However, many teachers also thought adopting American pedagogy was dilemmatic as they found that compared to Chinese model of teaching students learned less about the language basics and grammar knowledge. Although students enjoyed doing activities, they often got carried away during the activities. Despite the fact that the Chinese model of learning was not favored, the teachers still believed that direct instruction, study of texts, and memorization play a fundamental role in learning due to their Confucian educational beliefs. Thus many teacher participants in the study adopted what they believed positive aspects of Chinese education into their current teaching practice. For example, according to the teachers, the adherence to the practice of greetings and bowing (*xing li* 行礼) at the beginning or end of a class, as a way to express respect between teachers and students, is an influence from Confucianism. All of the teachers said that the ideal pedagogy is one that integrates both American and Chinese teaching approaches.

19.2.1.3 Case 3: Northwestern P.R.C Teachers and Student-Centered Curriculum

In a qualitative case study, Beckett and Zhao (2014, 2015) looked at the influences of neoliberal market economy on teaching, especially the curriculum and pedagogical practices of the teachers in northwest part of P.R.C. Neoliberalism in market economy advocates open market and free trade, which promotes intense competition between countries for global resources. Under the guidance of neoliberal market economy, developing countries such as P.R.C. has introduced several rounds of educational reforms to improve its education quality and enhance the global competitiveness of its citizens. One of the reforms was the introduction and implementation of student-centered curriculum in its primary and secondary education system. The connection between neoliberalism and curriculum reform stems from a belief that in order to compete with countries such as U.S, P.R.C students must learn as American students do for a smoother transition to global completion. Different arguments can be made regarding what type of American education approach this could be, but the call for educating students who can meet the demand of changing reality through student-centered and inquiry-based collaborative and interactive activities are typical elements of Deweyan pedagogy. The analysis of curriculum

policies and interviews of 22 middle school teachers revealed that this new round of curriculum reform that took effect in 2004 was a sharp shift from its traditional curriculum and education system (Beckett and Zhao 2015). It adopted many western pedagogical concepts and practices including inquiry-based collaborative learning, school-based curriculum development, developmental evaluation, and portfolio assessment. It also called for decentralization of the educational system by encouraging and allowing the contribution of local governments and schools in its implementation, in contrast to its top-down approaches in policy implementation.

Many teachers reported changes in their instruction with fewer lectures and more interactive student activities (Beckett and Zhao 2015). All of them agreed that the new curriculum caters to the interests of students, enhances students' active participation in learning, meets the needs of ever changing globalized age, and thus should be carried out nationwide. However, some teachers indicated that new reform is a too fundamental a change that it disregards the traditional education philosophy. They expressed concerns about an extreme focus on intellectual knowledge acquisition and testing skills that overlooks moral education and character building which is the core of Confucian education, considered essential for the healthy development and well-being of the young generation (Beckett and Zhao 2015).

In addition, with the current exam system that remains unchanged, the implementation of the new curriculum poses more challenges than benefits (Beckett and Zhao 2014). *Gaokao* (college entrance exam) is still the primary benchmark for admitting students into colleges and universities. Interviews with teachers indicated that on the one hand teachers had to teach in alignment with *Gaokao*, and on the other hand, they had to design lectures and activities to meet the requirements of the new curriculum, which increased their work load and brought tremendous psychological pressure. What made it worse was the large class size in P.R.C. Most of the teachers interviewed taught two to three classes per semester, each between 50 and 70 students. They spent up to 3 h daily grading assignments, in addition to many more hours they used for lesson preparation. For many teachers, teaching and grading took almost all of their work hours during the day, especially for homeroom teachers. Additionally, teachers tutored students between classes or after school often outside their work hours and responsibility. They said that they worked long hours to cope for fear of being replaced and because they love seeing their students succeed, which makes all worthwhile.

Furthermore, professional development and trainings in general were not in place to support the implementation of the new curriculum (Beckett and Zhao 2014). Teachers found that the new concepts introduced were abstract and vague to understand and there was a lack of clear guidance and steps for transforming teaching practice both from the policy and administration levels. Even though various trainings have been provided by schools as well as local and central ministries of education, it only helped them understand types of changes that have been made in the curriculum, without adequate support for teachers' transition to the required changes. As a result, many teachers fell back onto traditional mode of instruction (e.g., textbook, lecture-based) and increased only students' activities in class, for

benefit of their students. Clearly there are discrepancies between policies and practices that need serious and systematic examination.

19.3 Uniquely Chinese and Confucian vs. Western and Deweyan

Beliefs that informed the Chinese students' and teachers' practices has to do with how Chinese societies have historically oriented towards tradition, honoring individuals who have mastered the classics, with a belief that basics are more important than creativity for school children (Gardner 1989). From this perspective, individuals need to acquire considerable body of knowledge before they can be creative (Gardner 1989; Pratt 2002). Common and proven knowledge that must be mastered by all are respected among Chinese in schools and in work place. Creativity is encouraged only after extensive modeling on the work of masters according to established rules as evidenced by the Chinese saying "once you read 10,000 books, your pen performs wonders" (读书破万卷,下笔如有神).

In Confucian Chinese educational culture, theoretical knowledge is more valued than practical learning skills, which could explain students' desire for more information rather than learning skills. For example, a bright child is referred as *congming* (聪明) having acute ears to receive and analyze information accurately and sharp eyes to be sensitive to external objects, suggesting that listening and observing are more important that hands-on activities (Beckett 1999) for intelligence. According to Mencius, for example, "those who labor with their minds govern others; those who labor with their hands are governed by others" (Dobson 1963, p. 117).

Although many of the Confucian educational concepts discussed in the chapter, including those above, were not originally what Confucius advocated, his ideas and practices were further developed by his followers generations by generations to what is known as Confucian education nowadays (Elliot and Tsai 2008). It was the interpretation and application, including misinterpretation and misapplication of Confucius' thoughts, the adaption of his ideas to fit the needs of every succeeding age, and the branches of Confucian school over the centuries that made it to Confucianism (Nylon and Wilson 2010). According to Nylon and Wilson (2010), even values that existed before him or belonged to his critics are now dubbed as Confucian. In this chapter, we are using Confucian education and epistemology in its plural form to capture the present-day practices of Chinese education that was developed from the Confucian tradition.

One such extended development of Confucius' views includes the primary concern with perfection of traditional values with little regard to practical skills as reflected in the civil servant exam that is still in practice. Traditional Chinese education is about delivering content and developing character (Chyu and Smith 1991). Teachers are seen as "encyclopedia" (Gao et al. 1996, p. 22) who transmit knowledge and model characters and therefore the natural center of the classroom and

highly respected. Learning is viewed as acquisition of knowledge from others as a change in understanding of something external to oneself with extreme deference to teachers and other authorities (Pratt 1992). Structure and close guidance are expected (Beckett 1999).

The rationale behind such practices is that Chinese societies have been hierarchically organized for centuries, where the leaders are always clear and everyone else fits in relation to the center of power. It is believed that older authority figures know what younger people should learn and how they should behave. These could be the reason for students' desire to learn more from their teachers rather learning from peers in groups. Traditional Chinese perspective also holds that education process involves transmission of proven/authoritative knowledge by teachers systematically through prescribed textbooks (Garrot 1993; Ping 1995). According to Ping (1995), Chinese revere books as embodiment of knowledge, wisdom, and truth and follow textbooks strictly. Teaching without books could be seen as casual and unprepared. These could be the reasons behind students' (Beckett 1999) frustrations with research and desire to learn from texts taught by teachers.

In Zhao's studies (2014, in progress), Chinese teachers under the influence of Confucian epistemology, emphasized efforts, hard work, and endurance of students (Hue 2007) that they focused less on making the class fun and engaging, thus leading to the resistance by American students. For teachers, learning is an individual effort that requires students to work on the learning tasks they are assigned, endure the boredom of learning, and pay attention to what teachers say and also show self-control (Hue 2007; Zhao in progress). Brought up in a Confucian culture, teachers put strong emphasis and demand on students' efforts and academic achievements (Yao et al. 2011; Zhao 2014). Such beliefs and practices in Confucian education apparently conflict with Dewey's teaching philosophy that stresses teachers' responsibilities in designing activities that are both engaging and educational.

The implementing gaps of the new curriculum in north western P.R.C certainly are caused by various factors including professional and psychological challenges to teachers, lack of resources and support from school administrators, and inadequate guidance from professional development institutes. The most important factors, however, are the radical change from its educational tradition and the mismatch with exam-oriented education culture (Yan 2012). As noted earlier, Chinese societies respect tradition and cultural legacy. The new curriculum adopted a process oriented student assessment that considers student' learning processes and daily behaviors rather than solely counting on test scores. However, as a nation with a long tradition of national curriculum and standardized testing, the transformation of its exam-oriented system is probably not foreseen in the short future. The dilemma between implementing western educational and sticking to its Confucian tradition will continue as reflected in teachers' efforts in reconciling requirements of *Gaokao* (高考) and new curriculum reforms.

19.4 Future Trends

It is clear from the above discussion that traditional Confucian views that the Chinese ESL students in the Beckett (1999) and teachers in Beckett and Zhao (2014, 2015), Zhao and Beckett (2014) as well as the Zhao (in progress) held and applied suggested their practice of dilemmatic pragmatism and neo-patriotism. As pointed out earlier, neo-liberal patriotism is a result of Chinese confidence in their ability to compete globally and continue their beliefs about the virtues of Confucian Chinese pedagogy. This transpired in Beckett (1999) student participants' desire to learn from authority, valuing facts and individual learning rather than learning process and group learning, and "basics" rather than creativity, but pragmatically continuing their studies in Canada to achieve their larger goal to enter major universities in North-America, hinting a dilemmatic pragmatism. The teacher in Zhao and Beckett (2014) also adapted dilemmatic pragmatism by changing her Confucian pedagogy to Deweyan project-based instruction pragmatically as she came to a realization that the former might be a mismatch with students' expectations of pedagogy in U.S teaching context and was therefore demotivating. The teachers in Beckett and Zhao (2014, 2015) embraced the new curriculum reform introduced with neo-liberal market economy, seeing some of its virtues, but when faced with dilemma to ensure students' success in the absence of adequate support, they pragmatically reverted back to their traditional textbook and lecture-based pedagogical approach. The pedagogical practices of teachers in Zhao (in progress) study suggest a neoliberal patriotism in that despite the fact that traditional learning approach was not favored, these teachers still believed that Chinese model of teaching, especially direct instruction and study of texts and memorization are fundamental. They adopted aspects of Chinese education into their current teaching practice in U.S., including incorporating a Confucian practice of greetings and bowing (*xing li* 行礼) at the beginning or end of a class, as a way to express respect between teachers and students. All teachers in this study believed that the ideal pedagogy is one that integrates both American and Chinese teaching approaches for U.S schools. In transitioning into a Deweyan, student-centered curriculum, the concerns about neglect of Confucian tradition expressed by teachers, along with how Chinese teachers strived to integrate Confucian teaching into their U.S. classrooms all explained their pride and value of their cultural heritage. In a way, it also indicates the importance of Confucian tradition in education and people's belief that the wealth of Chinese education model can be made known to the rest of the world. We believe this suggests neoliberal patriotic attitude that comes with P.R.C's new-found economic and political power, without which Chinese people learned from U.S and Canada unidirectionally and their practices admirably.

As P.R.C continues to grow economically, politically, and militarily and as more and more Chinese people desire to be part of the middle and upper class strata, we believe the dilemmatic pragmatism and neo-liberal patriotism identified in this chapter will continue to grow. More empirical research would be helpful for further understanding of these theories. For example, many more students and teachers in

different contexts can be interviewed regarding their beliefs about the current and future trends in Chinese models of education. Questions could directly focus on the connections among neo-liberalism, neo-patriotism, and dilemmatic pragmatism. Teachers and students can also be observed to see how their beliefs transpire in action during formal and informal teaching and learning. Multimodal discourse analyses can be conducted to see how Chinese governments and societies encourage neo-liberal patriotism and various contexts.

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Chapter 20
Chinese Models of University Quality Assurance: Case Studies from China and Taiwan

Chuing Prudence Chou

Abstract Universities in China and Taiwan have undergone drastic changes in the last two decades, including a series of new quality assurance efforts. The changes in China first started in an era of the Open Door policy in the early 1990s, which resulted in an unprecedented economic growth and social development. Meanwhile, Taiwan's higher education has undergone a rapid political democratization and economic transformation, largely due to the processes of deregulation and decentralization as a result of lifting martial law in 1987. In response to the pressure for global university ranking, many public universities in both Chinese societies have competed for bulk governmental funding to strive to become world-class institutions despite an increasing discrepancy in resources and development among universities. It is argued that both China and Taiwan's quality assurance models have encountered similar challenges, and yet their origins and outcomes remain quite distinct. Though quality assurance has served as one of the driving forces for improving educational institutions, the whole evaluation process has reinforced the monopoly and hegemony of government over universities in both societies. The social costs are high and the benefits are subject to debate.

20.1 Introduction

The introduction of university quality assurance is an inevitable part of the worldwide university expansion in the last four decades. The university student population increased from 36.2 million in 1970, to 182.2 million in 2011, of which 46 % came from East and South Asian regions (UIS 2013). The undergraduate student number even increased 10 times in China (UIS 2014), while six times in Taiwan (MOE 2015) over that period of time. The university admission rate has decreased

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from the elite type (15 %) to the mass type (between 15 and 50 %), and reached the stage of the universal type (more than 50 %) (Trow 2005). As greater numbers of students gain access to universities, the question of how to exert control over quality in higher education becomes a great concern, and international agencies such as the Organization for Economic Co-operation and Development (OECD), the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the World Trade Organization (WTO) have initiated programs to foster quality enhancement. Governments also face the demanding need to reallocate limited educational finances, which have experienced constraint due to the expansion of higher education (Chou and Ching 2012). Thus, university ranking based on prestige and research performance has come to serve as one of the major criteria for government funding (Chang 2012; Fiske 2004).

Higher education on a global basis is also facing another important issue. Universities and colleges have to be responsible for quality assurance of education in response to a call for global standard setting. In other words, the concept of assessment of university accountability and performance, including faculty research, teaching and student learning/development has been emphasized (Alexander 2000). Consequently, teaching and learning issues have been widely discussed in higher education institutions (HEIs) over the last decade.

In addition, higher education has become interconnected with trends of globalization and internationalization, development of information communication technology, and a set of political and economic transformation. These changes together produce multifaceted influences on higher education in China and Taiwan. In particular, the ideology of globalization has been acting as one of the driving policy agenda in China and Taiwan (Mok and Lee 2000). For example, a sudden influx of international students and faculty members was clearly observed in both societies. This new emerging phenomenon represents university internationalization policies which have served as a national priority in higher education in response to globalization, especially in asserting higher education quality.

On the other hand, China and Taiwan also have concurrently experienced the expansion of higher education enrollment which resulted in the decline of public funding allocation since 1990s. This trend has created a tremendous pressure of how to maintain higher education quality. In China and Taiwan, government policy toward higher education quality assurance has shifted dramatically. In addition to research publication, universities now credit more on teaching and learning than a decade ago. In particular, quality assurance for teaching and learning has attracted more and more attention than before. This phenomenon is also an awakening response to globalization worldwide which requires universities to enhance undergraduate teaching and learning quality in a knowledge-based society.

20.2 China's Recent Higher Education Development and Reform

Higher education in China has been provided by the central and provincial governments respectively and operated directly under their administration for the last five decades. The disadvantages of this system were that the state undertook too many responsibilities/authorities over HEIs at the expense of institutional flexibility and academic autonomy. With central governance over HEIs, Chinese higher education has been long criticized as inefficient, segmented, and robust in responding to social needs and the global trend for accountability (Fan 2006; Min 2004; Chou 1999). Therefore, the Chinese government launched a series of policy and structural reforms to improve the quality of HEIs. Specifically, reforms in 1990s took place in this regard including the reconstruction of over-centralized governance, improvement of management, effectiveness of resource allocation, expansion of student recruitment, advancement of faculty qualification, and change of job-placements after graduation (Min 2004). The overall objectives of higher education reform over the last two decades are to introduce shared governance and responsibilities among different levels of governments, society and HEIs. In so doing, it is expected that the central state will be responsible for the overall planning and macro management, while the local governments take the lead, and HEIs follow the laws and have more autonomy in their daily operations and quality advancement.

In addition, student enrollment growth over the past decade has also changed the scenario of Chinese higher education to a great extent. For example, the regular annual undergraduate student enrollment in China was around 1.08 million in 1998, 4.47 million in 2004 (Wan 2006). However, in the year of 2012, new student enrollment in HEIs climbed to more than 6.8 million, with the admission rate over 75 % as a result of the great enrollment expansion since 1998 (MOE PRC 2010 http://edu.qq.com/a/20120606/000041.htm). As a result of the "massification of HEIs" over the past decade, an era of free higher education in China has come to an end (Huang 2003).

With respect to reform policies, since the mid-1990s, China has committed to the establishment of world class universities, key disciplines and high-qualified talents. The overall objectives of these education reforms have targeted on qualitative and quantitative improvement, such as innovation of science and technology, and improvement of research in humanities and social sciences (Huang 2005). Among these efforts, the Ministry of Education (MOE) first introduced Project 211 in 1995, with an attempt to establish 100 key universities in China for the twenty-first century. By 2002, China's central government invested 18 billion RMB in 99 institutions as part of Project 211. In 1998, Project 985 (because of being announced in May 1998) was launched with additional bulk funding to establish world-class universities and key disciplines and research centers. Once again, Peking and Tsinghua University coupled with another 38 universities received these extra funding from Chinese government as well as local authorities (Wang 2010a; http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/s3336/201001/xxgk_82267.html).

20.3 Chinese Higher Education Quality Assurance

'Quality Assurance' (QA) is a highly contested term with multiple definitions used in different areas of higher education (Barnett 1992). It also involves different measurement of higher education performance based on selection of criteria, approaches and methods for assuring university quality (Tam 2001). Above all, one QA indicator regarding students' educational processes concerns the development of individual students' autonomy, intellectual integrity and the capacity to act as a citizen in a democratic society (Bickmore 2012). As a result, the role of students in quality assurance has attracted increasing attention around the world. Student feedback on the courses they took and surveys of their degree of satisfaction with their educational experiences have become one of the major criteria for university quality assurance in the eyes of public funding agencies and stakeholders (Li and Zhu 2012; Alaniska et al. 2006).

According to Rowley (2003), there are four main reasons for gathering student feedback:

1. To offer students the opportunity to comment on their courses and instruction and provide suggestions for improvement;
2. To encourage students to self-reflect on learning processes and outcomes;
3. To provide students with the opportunity to express their satisfaction level about their learning experiences;
4. To enable HEIs to come up with their own standards/indicators based on student survey results for benchmarking purposes in the marketplace.

As the student body gears toward more diverse in the process of massification of higher education, university quality assurance becomes a concern and issue across the country. As a result, the Chinese MOE came up with a top-down and compulsory quality evaluation policy in 2002 and launched a 5-year-cycle assessment plan among HEIs to evaluate Bachelor degree programs and non-degree degree programs throughout China. The Chinese QA policy includes both an external and an internal system. The external assessment has three dimensions (Li 2010):

1. Public supervision with central policy guidelines, such as compliance with PRC Higher Education Law, and the Action Plan of the Invigoration of Education 2003–2007;
2. Monitoring processes through various governmental evaluation agencies (such as national teaching quality evaluation, provincial/local assessment, university teaching-based evaluation, and other discipline-based reviews);
3. Various non-governmental institutions and agencies producing university rankings and evaluation benchmarking, such as such as Shanghai Jjiao Tong University's Academic Ranking of World Universities, Research Center for Chinese Science Evaluation of Wuhan university, The Chinese Universities Alumni Association Ranking, and the NETBIG, The University Ranking Lists for Wu, and so forth.

Since 2002, external evaluation agencies at both national and university/local levels have been set up to evaluate HEIs in China (Ding 2008). At the national level, Ministry of Evaluation established the Evaluation Office of the Higher Education Department (EOHED) to take charge of education quality evaluation. Another MOE-affiliated Higher Education Evaluation Center (HEEC) and the China Academic Degrees & Graduate Education Development Center (CADGEDC) are responsible for execution of the nationwide evaluation of Chinese HEIs in a 5-year cycle. These centers and agencies also conduct research on assessment policies, regulations, and theories, along with the establishment of evaluation databases to enhance higher education policy making in China (Huang 2005).

At the university level, some HEIs established their own teaching quality assurance offices/centers monitoring internal evaluation of degree granting and undergraduate teaching. At local levels, most provincial governments also have their own local higher education evaluation agencies engaging in local HEIs quality evaluation (Huang 2005; Li and Zhu 2012).

Currently, higher education quality assurance in China is mandatory and operated by evaluation panels appointed by HEEC. Like many others in the world, the QA process in China includes the flowing procedures that all HEIs are required to comply with:

1. Meeting standards and guidelines issued by QA agencies and a government-appointed Evaluation Panel;
2. Preparing an institutional self-review report;
3. Hosting the Evaluation Panel's on-site visits;
4. Forwarding Evaluation Panel reports to university and MOE;
5. Submitting institutional self-improvement reports.

In addition to the external quality assurance system, another internal system is emerging within Chinese universities. Soon after the first 5-year cycle of national Teaching Quality Evaluations for undergraduate (2002–2007, later extended to 2008 in which 589 universities evaluated), Chinese MOE required HEIs to develop their own institutional internal quality assurance schemes. These are characterized as follows (Ding 2008; Li et al. 2008):

1. Establishment of semi-independent or institution-affiliated teaching evaluation centers responsible for the development and operation of internal quality assurance;
2. Recruitment of experienced and retired teaching supervision/steering groups for classroom observation and quality improvement;
3. Engagement of on-site peer review for classroom observation and teaching feedback;
4. Administration of student survey through questionnaires, individual/group interview, and student representative reports;
5. Preparation for annual QA institutional self-review report;
6. Construction of teacher training opportunities including pre-and-in service training programs, especially for all new faculty members.

The second round of evaluation focused more on individual institutional characteristics using information technology. It is also expected to comply with the goals of the Chinese National Reform and Development Educational Plan Outline for Medium and Long Term (2010–2020). In other words, the institutional internal QA system has been the major change that differentiates the second round from the first round of national evaluation in effect before 2008 (Ji 2010).

In addition, the various non-governmental institutions and agencies, such as Shanghai Jiao Tong University's Academic Ranking of World Universities, and Research Center for Chinese Science Evaluation of Wuhan University, also play as intermediators between government and HEIs by producing regular university rankings and benchmarking. Their annual university ranking reports sometimes attract even more domestic and international attention.

20.4 Chinese QA Challenges

Given the political authority and party supervision over Chinese HEIs, the QA systems are not only conducted in a top-down approach but also with mandatory centralized criteria and standards regardless of institutional and regional differences. As a result, the discrepancy between institution and regions has increased over the last few years thanks to the current approach (Li and Zhu 2012). In addition, the external QA focuses on quantifiable data and outcome collection, such as teacher qualifications, educational resources, instructional management, and graduate employment rates as major performance indicators. Such information may oversimplify the complexity of university instruction and learning processes and ignore insider viewpoints, including those of academics, students and staff (Ulrich 2001).

After the first round nationwide external evaluations from 2002 to 2008, the Chinese MOE initiated another internal quality assurance system to remedy all the pitfalls related to institutional differences and regional needs. Student learning experiences are also included such as intellectual development, campus engagement, and course satisfaction. The current internal quality assurance systems also rely heavily on university teaching administrators for data collection rather than teaching staff and students themselves. The reason is that most Chinese HEIs are still governed under the central administration, which tends to pressure all related parties to strive to increase institutional reputation and resources instead of self-improvement.

In addition, most quality assurance policies and guidelines are initiated by the central administration and monitored by governmental agencies, which has created tremendous pressure for institutional compliance with a standardized formula and the dominant authority at the expense of individual needs and features of HEIs (Li 2010). It also has very little impact on the actual process of student learning and individual growth.

In order to meet the needs of diverse student backgrounds while maintaining educational quality, HEIs also need to take the initiative in participating in the QA process through goal setting and indicator verification. As a result, a paradigm shift and reconstruction of the teaching and learning process in HEIs may occur, followed by a genuine learning-focused QA that will enhance student learning performance and thus improve higher education quality in China. Above all, two-way communication and dialectical dialogue can serve as a foundation for learning-focused QA, which will engage teachers, students, and administrative staff in working as a team to improve the QA process through the advancement of a shared university vision and common goals.

20.5 Taiwan's Recent Higher Education Development and Reform

In Taiwan, higher education was closely linked to economic development and subject to government control before the 1980s. The government implemented rather strict control measures over both public and private institutions. Higher education remained a means to cultivate elites using a rigorous college entrance exam system to select talent (Chou 2012).

It was not until the lifting of martial law in 1987 and onwards that the number of HEIs began to rise, resulting in an unprecedented expansion in the number of students. Consequently, the government's public spending on higher education became relatively constrained. In order to alleviate the financial burden of the higher education expansion, the government adopted neo-liberal principles and market mechanisms by granting HEIs greater freedom and rights in university governance and operational budgeting.

Meanwhile, as Taiwan's government responded to public demands for "more high schools and universities" and to alleviate the pressure for advancement, along with a demand to establish universities in local elections, by 2008 (with per capita income of US$17,000 at the time), the number of university students had increased to 1.12 million, a 6.5-fold jump since 1984. By year 2011–2012, the number of HEIs had increased to 163. The total number of university students had reached nearly 1.35 million, or nearly 6 % of Taiwan's entire population of 23.3 million people (Ministry of Education 2012).

The rapid expansion of the higher education system also had some side effects including an overly-rapid upgrade of some vocational/technical colleges into 4-year university system causing a decline in the quality of education. Although the government relaxed its controls over universities, this introduced market competition mechanisms which resulted in the uneven distribution of resources among public and private institutions, causing after-effects such as quality decline issue.

20.6 Taiwan's Higher Education Quality Assurance

As a result of the influence of neoliberal ideology and the expansion of higher education, Taiwan's HEIs are now competing for resources, funding, and students. In order to meet the challenge of global competitiveness and enhance university effectiveness, universities have been required to carry out regular external and self-evaluation in all aspects of teaching, research, and service. Meritocracy, accountability, and networking among faculty and staff now count for considerably more than in the past (Chou 2008).

Accordingly, Taiwan's University Law, revised in 2003, reiterated the amendment of university evaluation to serve as one of the major mechanisms for funding to eventually assure the quality of higher education. QA policies have been introduced and reinforced since 2005 based on the law. Historically, Taiwan's university evaluation can be traced back to 1975. However, from 2004 to 2005, a professional evaluation association was commissioned for university evaluation. General university affairs were targeted based on six components: teaching resources, extension services, student affairs, general education, administrative support, and degree of internationalization. The new indicator of internationalization stressed the importance of integrating universities into the global context. Later, the Taiwan Assessment and Evaluation Association (TWAEA) took charge of the first round of university evaluation and quality assurance from 2006 to 2010. The second round (2011–2016) of university quality assurance focuses more on student-based learning outcomes.

In addition, it also requires more improvement in institutional self-positioning, university governance/management, teaching/learning resources, accountability, social responsibility, and sustainable self-improvement/quality assurance (Wang 2010a). The University Law entitles the MOE to allocate public funding to universities based on the above-mentioned evaluation result as references.

20.7 Taiwan's QA Challenges

In pursuit of quality assurance for universities that is comparable to the global standard, Taiwan has established a mechanism of QA to reach out to its international standard through more specific criteria for institutional improvement. For example, one private university was accredited in 2010 by the American Middle States Commission on Higher Education (MSCHE). (MSCHE 2015) It was the first institution in Taiwan and Asia to be accredited, and this took place after a long period of self-assessment, candidate status, and self-study procedures.

Another sign of progress is that the assessment of student learning has now become an important indicator for quality assurance in higher education since

around 2005 with the implementation of university evaluation, the Five Year, Five Billion Plan, the Teaching for Excellence Plan, and department/graduate evaluation.

With respect to individual faculty members, the establishment of another internal and external QA system is intended to monitor faculty publication records in various international and domestic databases, such as the Science Citation Index (SCI) and Social Science Citation Index (SSCI) by Thomson Reuters and the Taiwan Social Science Citation Index (TSSCI). All of these new indicators serve as an effort to be in accordance with international standards that will lead to awards, achievements, and contributions to scholarship.

Similar to China, university QA in Taiwan is a top-down policy administered by the MOE by law, which requires regular institutional evaluation by the above-mentioned professional associations and departmental assessment of individual faculty members. Moreover, the evaluation results influence institutional public funding and resources as well as faculty qualifications for promotion, salary, sabbatical leave, and extra duties related to teaching and promotion to administration.

In other words, all of these policies are an attempt to enhance university quality. It is also expected that the process of QA will help institutions to come up with a more concise and detailed plan to improve their core competence, course design, and educational goals. Undergraduate student ability and learning achievement should now be at the core of the institutional evaluation (Chang 2011). Frameworks such as the SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis and the PDCA (Plan-Do-Check-Act) cycle are widely applied, partly due to the need for compliance with the semi-governmental evaluation agencies whose QA principles and criteria are demanding and authoritarian (Yen 2011).

Overall, the evaluation process has been very time-consuming, and the movement of human resources and money that is required is overwhelming, according to university and staff involved (Peng 2010). Questions also arise regarding the qualifications of the reviewers and the duration of on-site visits. Disagreement between university and evaluation commissioners over QA results has been a major concern for stakeholders. In addition, more and more faculty members are falling victim to such evaluation criteria, which emphasize research more than teaching and other performance in social capacities. In fact, faculty members across Taiwan have lost their jobs due to their failure to satisfy requirements for research performance or refusal to submit to an evaluation (Wang 2010b).

Furthermore, owing to the lack of specific criteria and quantifiable data available to justify effectiveness of learning and teaching, the number and impact of local and international journal publications has become the major evaluation criteria for faculty research performance and HEI competition for government funding and resources in Taiwan.

20.8 Pros and Cons of the Chinese and Taiwanese Models of University Quality Assurance

As the above discussion indicates, higher education in China and Taiwan has followed a similar pattern along with the global expansion of neoliberal ideology. Universities and colleges in both Chinese societies were regulated by the central government for many decades until economic restructuring in China in the early 1990s and the political opening-up in Taiwan during the late 1980s. Higher education reforms in both societies generally followed government policies and directions. Chinese higher education reform is more geared towards a semi-authoritarian approach, in an attempt at readjusting the relationships between government, society, and HEIs. An emerging shared-responsibility policy between the central and local authorities came into practice in recent years for the sake of promoting burden-sharing and social responsiveness. Market forces have had impacts all across university campuses where curriculum, staffing, tuition plans, and many other aspects of universities are expected to undergo dramatic transformations to empower HEIs to meet market needs.

In Taiwan, the general public in Taiwan anticipates a power withdrawal from the government to allow universities to achieve greater autonomy, efficiency and flexibility in decision-making and daily operation. However, as a result of higher education expansion and budget cuts, universities are now facing new challenges, such as increasing governmental demands for accountability and quality assurance.

Consequently, both the Chinese and Taiwanese governments have launched similar projects in an attempt to enhance international competitiveness among universities. To achieve the goal of establishing 100 leading universities, research centers, and disciplines across China in the twenty-first century, China started its "211 Project" in 1995 and "985 Project" in 1998. These projects aimed to develop a group of HEIs that would compete to enter the ranks of the top world-class universities (Li 2010). Whereas in Taiwan, a series of reform policies such as university evaluation, the Five Year, Five Billion Plan, the Teaching for Excellence Plan, and department/graduate evaluation have taken place, all of them focused in large part on QA. These initiatives were catalyzed by the declining quality of university education due to university expansion, the market economy and global competitiveness.

With respect to university QA, both China and Taiwan launched evaluation policies by the establishment of higher education evaluation agencies to conduct nationwide quality assurance practices. They were all top-down, macro-level, and coupled with centrally mandated procedures, which worked to reallocate public funding and create changes in institutional ranking in both societies. After the first cycle of evaluation, a more micro-level approach was introduced in China and Taiwan, which concurrently emphasized on teaching and learning with the hope to include factors such as institutional and regional differences. The focus of assuring student learning

development and outcomes has also become one of the emerging priorities in both societies.

Both China and Taiwan are in a similar transitional situation in creating their own models of university quality assurance while responding to global market forces and international competition. The issue of how QA policies have affected HEIs in both societies remains controversial, especially given all of the investment of time and resources mobilized nationwide both within and outside of universities. The challenge of globalization for higher education in the making of global citizens requires a paradigm shift from "passive modes of knowledge transmission" to "active modes of knowledge engagement", which will enhance the quality of university instruction and learning and eventually benefit more students in the global era (Neubauer 2007). Whether the Chinese and Taiwanese university quality assurance models have reinforced the monopoly and hegemony of government over universities in the market-driven world or served as a facilitating force for quality improvement that invites all stakeholders, including students, to participate in the process is subject to debate and deserves further investigation.

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Chapter 21
Chinese Teaching and Learning of Mathematics

Ming Ming Chiu

Abstract Exam-driven rewards, educational resources and academic beliefs drive Chinese students' high scores on international tests of mathematics but reduce their willingness to take risks, as shown in analyses of Chinese exams, curricula and classroom observations. As scoring high on Chinese government exams yields economic, social and political rewards for both students and their families, extensive family and school resources are allocated to improve student learning. Family members encourage their children to study hard and spend heavily on books and other educational resources. Chinese societies create challenging, national curricula with standardized textbooks and teacher training. Instruction is teacher-centered and focused on basic mathematics concepts and skills via refined lectures and repeated practice. Exposed to this instruction, Chinese students often understand abstract mathematics ideas, recognize routine problems, recall many suitable strategies and apply them successfully. However, this emphasis on mastery discourages Chinese students from taking risks and attempting non-routine problems.

21.1 Chinese Teaching and Learning of Mathematics

International comparisons show that Chinese students often outperform other students in mathematics (e.g., Chiu 2010), attracting interest from researchers, educators, and policy makers. This chapter integrates research across four levels (nation, school, classroom, individual) to examine the factors that contribute to Chinese students' learning of mathematics (see Fig. 21.1).

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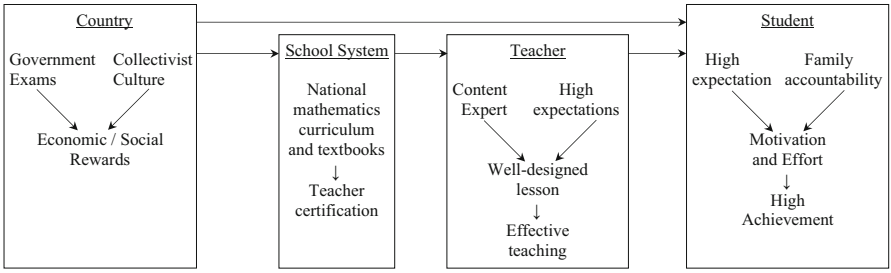

Fig. 21.1 Country, school, teacher and student influences on Chinese students' mathematics achievement

21.2 National Context

Grounded in government exams, economic rewards, and collectivist beliefs, Chinese people (especially educators) have traditionally supported student learning and achievement on formal exams. Beginning with the Sui dynasty, the *Keju* civil service exam system from 606 to 1905 both selected China's government officials and gave financial rewards, prestige, power, and fame to their extended family, thereby powering collectivist beliefs, values and norms –in contrast to Western, individualistic beliefs (Suen and Yu 2006). In the modern era, Chinese economies continue to reward education; in Hong Kong for example, a high school teacher earns a manual worker's lifetime wages in 15 years while a professor earns it within 5 years (McLelland 1991). Thus, Chinese government officials, parents, teachers and students learn that academic achievement tightly aligns with economic, social and political success (Reitz and Verma 2004). As a result, Chinese schools and teachers strongly motivate and support students' academic success on formal exams, including mathematics, which opens doors to many professions.

Chinese people's beliefs affect their children's mathematics learning through high academic expectations and educational resources. Encouraged by publicized, high test scores and successes by students from various socio-economic backgrounds, Chinese people view effort as more important than ability and have high expectations for each student (Stigler et al. 1990). Family and relatives often remind students that their success or failure affects their entire family's reputation (Chiu and Ho 2006).

Chinese people also provide greater educational resources (books, tutoring, etc.), both in their own families and in the broader school system (Lam et al. 2002). Buying proportionately more educational resources also reinforces family commitment to children's learning, implicitly suggesting further social rewards and incentives for higher achievement (Chiu and Ho 2006). Extra educational resources also give children more learning opportunities on which they can capitalize to improve their academic achievement (Chiu 2007). Furthermore, family and relatives often ask young children to count and perform arithmetic, similar to US parents asking young children to read nearby signs (Kelly 2003).

Deeply rooted in Chinese culture, extrinsic motivators such as examinations, mathematics achievement expectations, and social status provide incentives for student learning (Li 2003). Furthermore, Chinese students generally embrace these incentives; those with higher extrinsic motivations or higher intrinsic motivations have higher mathematics scores, unlike Western students who perform better only with greater intrinsic motivation (Chiu and Zeng 2008). Driven by both intrinsic and extrinsic motivations, Chinese students spend more time doing homework, learn more and score higher on mathematics tests than students from other countries (Chiu and Zeng 2008; Stigler et al. 1990).

21.3 Mathematics Instruction in Chinese Schools

Supported by parents' and society's high expectations of students' mathematics achievement, schools in Chinese societies adopt challenging curricula, require certified teachers, support group teaching preparation, and share the knowledge of expert teachers (Ministry of Education of China 2002). Schools in collectivist Chinese societies implement these high expectations through a national mathematics curriculum and standardized textbooks (e.g., Geary et al. 1996). To teach these challenging curricula, most teachers in Chinese schools received national training and certification (Chiu 2011).

Furthermore, teachers often work together and share their knowledge. For example, group teaching preparation is common in urban schools of mainland China (Ni and Li 2009). Teachers often work together to understand the teacher manuals, the student textbooks, the curriculum standards, and teaching methods that are believed to be effective. The Ministry of Education in mainland China officially approves student textbooks and teacher manuals (schools can only use approved textbooks), endorsing them as effective for mathematics teaching (Ministry of Education of China 2002). In addition, successful teachers ("first-class" teachers) demonstrate their classroom teaching to their colleagues inside and outside their school districts to help them learn and improve their teaching (Li 2004).

As a result, Chinese teachers often have similar lesson plans for a given teaching unit, with similar learning goals, worked-out examples, homework problems, and presentation structures (Ni and Li 2009). Mainland China's highly centralized educational system within a collectivist culture aids organizational and administrative efficiency by quickly disseminating socially - and culturally - favored teaching methods (Li 2004). As Stevenson and Stigler (1992) noted:

> The techniques used by Chinese … are not new to the teaching profession nor are they foreign or exotic. In fact, they are ones often recommended by American educators. What the Chinese … examples demonstrated so compellingly is when widely and consistently implemented, such practice can produce extraordinary outcomes. (p. 198)

Taken together, family, school, and teachers' high expectations and investment in educational resources for students' mathematics achievement tend to raise students'

standards, increase their motivation, enhance their learning behaviors, and raise their mathematics achievement (Geary et al. 1996). The combination of collective family expectations, challenging mathematics curriculum, and complex lesson activities help students appreciate the difficult mathematics they must master to perform well on national, university entrance exams (Davey et al. 2007). Combined with their collective beliefs that their academic success or failure affects their family, Chinese students are motivated to study diligently, yet lack confidence and fear failure (Lam et al. 2002).

21.4 Chinese Preschools

Chinese preschools use an *operational mathematics curriculum* linked to primary school mathematics (Ministry of Education of China 2002). Since the 1920s, this adult-centered instructional approach introduces mathematics to preschoolers in an accessible manner (Cheng 2008). Like Montessori schools, the operational learning curriculum concretizes mathematics (e.g., using an abacus to show quantities), connects the manipulatives to their respective mathematics concepts (e.g., cardinal and ordinal numbers, place values, arithmetic operations) and organizes them to highlight their systematic structure (e.g., addition, subtraction, and part-whole structures in a base-10 system). As a result, students create images of the logico-mathematical system of concepts and operations, thereby preparing them to learn mathematics in elementary schools (Cheng 2008).

Consider the following preschool mathematics example: students are shown four faces and asked to identify attributes that may be used to classify the faces into different groups (Cheng 2008). These four faces feature three attributes: (a) one face has a hat, and three do not; (b) two are happy faces, and two are angry faces; and (c) three are circular faces, and one is a square face. Preschool teachers ask their students to observe and analyze the attributes and relationships of the four faces. Then, they guide the students' use of beads to model the relationships as they solve addition and subtraction problems within this universe of 4 (e.g., $1+3=4$, $2+2=4$, $3+1=4$; $4-1=3$, $4-2=2$, $4-3=1$). Next, the students develop their understanding of part-whole relations for the numbers 1–10 by using a 10×10 grid to perform classification tasks.

The grid and these part-whole relationships can help preschoolers use composition and decomposition strategies to solve addition and subtraction problems involving larger numbers. For example, consider solving $8+7$ with the 10-complement strategy ($8+7=8+[2+5]=[8+2]+5=10+5=15$). First, teachers guide students to focus on the first addend (8 dots) and decide how many extra dots are needed to make up a row of 10 on the grid (in this case, $2+8=10$). Second, teachers ask students to split 7 into 2 dots and a remaining portion of 5 dots ($7=2+5$). Third, teachers guide students to add 8 and 2 to create a row of 10 on the grid ($8+2=10$). In the fourth step, students add the remaining 5 to the row of 10, yielding 15 ($10+5=15$). Then, students work independently on addition problems yielding sums greater than

10 (e.g., 5+9). This operational approach helps students acquire the skill components necessary for mathematics competence (Cheng 2008).

After benefiting from this instruction, Chinese preschoolers outperform Western preschoolers in many areas of mathematics (Miller et al. 2005). Among kindergarteners to third graders solving simple addition problems, Chinese students often used verbal counting strategies rather than counting on their fingers, compared to US students. Meanwhile, the primary backup strategy for these students were decompositions. Urban Chinese students who attended regular preschool and kindergarten education usually can count, add, and subtract 0–20 proficiently before entering first grade (Zhang et al. 2004).

21.5 Primary and Secondary School Instruction

The elementary and high school mathematics curriculum in Mainland China emphasizes *two-basics* (basic mathematics concepts and skills), and Chinese classroom instruction focuses on *refined lectures* and *repeated practice* (Ministry of Education of China 2002).[1] The two-basics view emphasizes foundational knowledge content and skills over creative thinking (Leung 2001). Chinese educators argue that repeated practice aids memorization and that greater exposure can help students think about the underlying concepts more deeply (Dhlin and Watkins 2000).[2] Hence, Chinese mathematics curricula have four student goals: (1) fast, accurate manipulation and computation of arithmetic, fractions, polynomials, and algebra, (2) accurate recall of memorized mathematics definitions, formulas, rules, and procedures, (3) understanding of logical categorizations and mathematics propositions; and (4) matching of solution patterns to types of problems via transfer (Ministry of Education of China 2002).

To implement these curricula, teachers present well-prepared lessons that include strong teacher control, coherent instruction, and abstract mathematics (Zhang et al. 2004). To deliver such refined instruction, teachers in Beijing spend over 6 h each day examining students' work and preparing lessons with colleagues (Huang and Leung 2004).

Teachers often maintain control by direct teaching to the whole class. Direct teaching helps teachers control the lesson flow to maintain class discipline (especially with 40–60 students per class in China), while engaging students in the learning activities (Huang and Leung 2004). As Confucian culture assigns content expertise to teachers, traditional Chinese students are also more receptive to the

[1] While each element of this Chinese model of mathematics education can be found in parts of other countries' models, the Chinese model has all of these elements and emphasizes their coherent integration for effective instruction.

[2] For detailed socio-historical analyses of the origins of these Chinese beliefs, see Zhang et al. 2004.

teacher's dominant role. Chinese teachers led their classes 90 % of the time (Zhang et al. 2004).

Secondly, the refined lecture integrates teaching content and classroom discourse through coherent connections that guide students toward each lesson's learning goal (Wang and Murphy 2004). Chinese teachers' lesson plans also enhance instructional coherence by emphasizing the relationships among mathematics concepts, unlike US teachers who often have unrelated mathematics activities in the same lesson (Cai and Wong 2006). For example, Chinese teachers from Guiyang in mainland China helped their students specify the similarities and differences between ratios and fractions to clarify their relationship (Cai and Wong 2006).

When students make mistakes, US teachers often simply correct them, but Chinese teachers often view them as learning opportunities, use their mathematics mastery to ask leading questions, and help students correct their answers (Zhang et al. 2004). By so doing, Chinese teachers encourage students to persevere, understand their mistakes, and correct them.

Schleppenbach et al. (2007) also compared the coherence of mathematics lessons in 17 Chinese elementary classrooms by examining the frequency and content of extended discourses. Extended discourses are relatively sustained exchanges that occur when a student answers a question (from the teacher or another student) and the teacher asks a follow-up question, instead of simply evaluating the student's answer as correct or incorrect. Consider this example of extended discourse (Schleppenbach et al. 2007):

Teacher:	Is this equation $2xy=5$ an instance of a linear equation with two unknowns?
Student A:	No.
Teacher:	Why not?
Student A:	The power of each unknown should be one for a linear equation in two unknowns. But for this equation, 2xy is one unit and its power is two.
Teacher:	The power of this single unit is two; therefore it does not belong to the type of linear equations in two unknowns. Do you agree or disagree?
Student B:	Agree.
Teacher:	Could you give an example of linear equation in two unknowns?
Student B:	$3x+2y=25$

Schleppenbach et al. (2007) found that extended discourse episodes occurred often in mathematics lessons in China. Furthermore, Chinese teachers plan coherent sequences of lessons that reference and build on one another. These well-designed and coherent mathematics lessons reduce ambiguity and confusion, thereby aiding students' understanding of mathematics concepts and skills (Dhlin and Watkins 2000). As a result, mathematics lessons in China are often highly coherent (Schleppenbach et al. 2007).

Related to instructional coherence, Chinese teachers value and use abstraction (rather than concrete representations as many US teachers do) to generalize mathematics relationships (Correa et al. 2008). Specifically, Chinese middle school teachers use concrete representations (e.g., abacuses to represent quantities, such as

three), predict student strategies, and assess student strategies in specific ways. Chinese teachers exclusively use concrete representations to mediate students' understanding of the main mathematics concept in the lesson (e.g., diagram of four cups with different amounts of water to help students compute and understand the concept of arithmetic mean; Cai and Lester 2005). When students use drawing strategies or estimates that yield correct answers, Chinese teachers view these strategies as less generalizable and give students little credit for them, unlike many US teachers (Cai 2005).

Thus, the two-basics and refined lecture with repeated practice may contribute to effective Chinese mathematics instruction. The two-basics approach can focus student attention on the key mathematics concepts, skills, categorizations, and flexible applications to problems. In contrast to US emphasis on classroom activities, China's refined lecture with repeated practice instruction can aid teacher's classroom management, increase lesson coherence, and help students generalize mathematics relationships in a series of small steps. Together, these factors might help Chinese students learn more mathematics than students in many other countries.

The above classroom observations along with Chinese students' superior performance on international assessments point to the capacity of mathematics curriculum and instruction to increase the mathematics achievement of Chinese children (Stigler and Hiebert 1999). Furthermore, children in different countries have similar IQ test scores, but Chinese students have higher numeracy test scores than other students, which also suggests the impact of mathematics classroom instruction (Geary et al. 1996).

21.6 Chinese Students' Mathematics Achievement

Taught in a two-basics curriculum and highly directive classroom instruction (Cai and Cifarelli 2004), Chinese students have strong computation skills and often readily solve routine mathematics problems.[3] However, this mastery-focused instructional approach discourages risk-taking, so Chinese students perform much worse on non-routine problems –often they make no attempts to solve them (Cai 2000). Consider a non-routine problem with multiple answers: "Juan earns $150 per day and Lynn earns $250 per day. If Juan and Lynn want to earn the same amount of money, how many days should each person work?"

Chinese students demonstrate high levels of accuracy and efficiency while solving word problems in mathematics. In particular, they often use abstract and generalized strategies to solve problems. Their use of symbolic representations and abstract strategies often helps them solve problems correctly and efficiently (Cai and Lester 2005). As noted earlier, Chinese teachers urge their students to express

[3] Consider this example routine question: Woodland and Plainsville are 65 km apart. On a map, these two town are 10 cm apart, and Plainsville and Middleton are 21 cm part. How far apart are Woodland and Middleton in actuality?

mathematics ideas formally and precisely (Lopez-Real et al. 2004), and discourage them from expressing mathematics ideas informally (Schleppenbach et al. 2007).

Chinese students also use multiple conventional strategies to solve mathematics problems, which aid accurate solutions (Cai 2000). When asked, for example, does each girl or each boy gets more pizza when seven girls share two pizzas equally and three boys share one pizza equally, over 90 % of the Chinese students use the conventional strategy of comparing the fractions 1/3 with 2/7. Only 10 % of them use less precise, non-conventional strategies.[4]

Chinese students can also generate many solutions for the same problem. When Chinese 6th graders are asked to generate three different solutions to the above pizza problem, about 40 % of the Chinese students generate more than one solution, whereas few US students do so (Cai and Lester 2005). Again, Chinese students prefer abstract representations such as: $7/2 = 3.5$ and $3/1 = 3$; therefore 3.5 girls share one pizza and three boys share for one pizza; so, fewer boys share the same size pizza and each one gets more pizza (Cai and Lester 2005).

However, Chinese students appear less willing to take risks to solve novel mathematics problems. Given a problem that they do not know how to solve, Chinese students often write nothing and leave it blank (Cai and Cifarelli 2004). In particular, Chinese teachers emphasize the Confucian doctrine that pretending to know when one does not know is dishonest, and so teachers often deduct credit for wrong answers to deter students from guessing. All of these instructional practices discourage students from risky and novel actions.

These studies raise the question of whether the greater risk aversion is a trade-off for Chinese students' high performance on basic mathematics concepts and computations (especially with directive teachers and high student-teacher ratios). While directive teaching and coherent instruction in Chinese mathematics classrooms likely reduces ambiguity for students, it might also deter students from taking risks or being creative. As globalization heightens awareness of other countries school systems' strengths and weaknesses, mainland China has responded to such concerns by exploring a new mathematics curriculum that includes mathematical computations, explanations, communications, engagement and disposition towards mathematics, including student discussions about how to solve non-routine problems such as the ones described above (Ni et al. 2008).

21.7 Conclusion

The ways in which the attitudes and practices of Chinese societies, teachers and students contribute to Chinese students' high mathematics performance but low risk-taking suggest possible implications for other countries' education systems.

[4] Consider this example of a non-conventional strategy to solve the above pizza problem: three girls share a pizza and the other four girls share a pizza; each of the latter four girls gets less pizza than do each of the three boys (Cai 2000).

Chinese government exams have historically rewarded high-scoring individuals and their families economically, socially and politically, driving both collectivist values and high regard for academic achievement. As a result, Chinese people have high academic expectations of students, give them substantial educational resources to enhance their learning opportunities, and encourage them to practice their mathematics skills.

Chinese school systems are highly centralized; adopt a challenging, national curriculum; require high standards for teacher certification; support group teaching preparation and share the knowledge of expert teachers. As a result, Chinese national curricula and national teacher certification yield shared practices, namely the two-basics curriculum (basic mathematics concepts and skills) and direct teaching classroom instruction, focusing on refined lectures and repeated practice. In contrast, US schools and teachers' practices differ widely even within the same district, with little consistency.[5] Whereas US teachers do not received standardized teaching preparation and often work in isolation (Cai and Wong 2006), Chinese teachers typically have strong mathematics content knowledge, collaborate on their teaching, develop coherent mathematics lessons focused on abstractions, and provide students with many opportunities to understand and correct their errors.

Chinese people's attitudes also contribute to Chinese students' higher mathematics performance on international tests, in comparison to students from other countries. Unlike in the US where people place less value on mathematics than other skills, Chinese people emphasize the importance of mastering mathematics. Encouraged by their immediate and extended family since early childhood, Chinese students are often strongly motivated through both external and internal sources, both of which are linked to greater mathematics achievement among Chinese students. Chinese students use efficient mathematics procedures, produce accurate solutions and generate many such solutions. However, the mastery nature of Chinese instruction discourages risk-taking, unlike US students who have great confidence (often overconfidence) when trying new methods (Chiu and Klassen 2010). As a result, Chinese students are unlikely to attempt problems to which they do not know the answer, especially novel problems with multiple solutions.

21.8 Implications

While some aspects of Chinese school systems are rooted in their cultural norms, other elements might be useful to consider in other school systems. Chinese school systems have particular societal structures and norms, teacher experiences and practices, and student expectations and achievements. Specifically, Chinese societies have collectivist cultural values; economic and social rewards for academic achievement; national curricula, national teacher certification and national exams; extended

[5] The Common Core Standards developed by the states in the US aim to create a common curriculum.

family support and high academic expectations of students. By collaborating with colleagues with content expertise, Chinese educators can design coherent lessons with abstract concepts, direct teaching and teacher control. As a result, Chinese students perform well on routine problems, with great accuracy and efficiency, but they show little openness or initiative and hence, perform poorly on novel problems.

The mathematics learning and performance of Chinese students suggest several possibilities that can aid students' mathematics achievement in other school systems; requiring or fostering teachers' mathematics expertise, aligning social rewards with performance, encouraging collaboration with colleagues and introducing non-routine mathematics problems. Educators generally agree that teachers must have sufficient content expertise in mathematics to help their students learn. If teacher certification programs cannot select students with prerequisite mathematics content knowledge, such programs can include development of such knowledge in prerequisite or required courses. Furthermore, educators can raise student expectations and align social rewards with academic achievement by highlighting exemplars of mathematical thinking and problem solving. Teachers can also collaborate with colleagues to create coherent lessons about abstract concepts, thereby helping their students attain these high academic standards. In both China and elsewhere, teachers can introduce non-routine problems to young students to help them acclimate to problems without simple algorithmic solutions, understand them and develop heuristics for solving them (Chiu et al. 2013). In short, after understanding the Chinese education model, educators in other systems can appreciate the importance of enhancing their teachers' content knowledge, aligning social rewards with performance, and fostering teachers' collaboration with colleagues to improve their students' mathematics attitudes and achievement, while including non-routine problems in their lessons to foster risk-taking.

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Chapter 22
Confucian Education Ideology and Its Impact on Chinese Mathematics Teaching and Learning

Zhaoyun Wang

Abstract The chapter discusses the core ideas of Confucianism in thinking, learning and teaching, and how Chinese mathematics scholars practice Confucianism to integrate Chinese traditions and Western education theories. The paper also discusses major distinctions in Chinese mathematics teaching and learning. The key aspects of Chinese mathematics education comprise integration of Western education theories and Chinese education ideology, Chinese heuristic teaching methods and the "two basics" in teaching and learning. Finally, the chapter identifies similarities and differences between Chinese and Western mathematics teaching and learning. Because of the influence of Confucianism, Chinese mathematics education uses a special model that supports students' achievement. This study also aims to help scholars understand Confucian theories in learning and teaching and develop robust learning theories.

22.1 Introduction

Over the last two decades, international mathematics education scholars' attention to East Asian countries has significantly grown because their students are top performers in international mathematics and science studies (Karp 2013). International studies in students' mathematics achievement such as the Trends in International Mathematics and Science Study (TIMSS) and the Programme for International Students Assessment (PISA) (Mullis et al. 2012; OECD 2013) show that East Asian students in grades four and eight consistently outperform their counterparts in other countries. Scholars in the mathematics education field have been seeking distinctions between East Asian and other countries and have found that East Asian countries share Confucian culture (e.g., Leung 2001), leading them to wonder why Confucian-based cultures have generated such productive forms of mathematics

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education (Clements 2013). Education scholars have examined the impacts of Confucianism on teaching and learning in East Asian countries.

Scholars have identified some reasons for East Asian students consistently outperforming others. The major reasons are related to East Asian mathematics teachers' deep understanding of mathematics knowledge, flexible interpretation of concepts, and collaborative work, and the teachers' teaching, learning and thinking (e. g., Cai 2004; Cai and Wang 2010; Ma 1999).

Researchers have also examined the major approaches to mathematics teaching. They have found that Chinese and US teachers have teaching gaps (Stigler and Hiebert 1999). For example, Cai and Wang (2010) conducted research on different perspectives toward effective mathematics teaching. The results revealed that US mathematics teachers emphasize student understanding with concrete examples while Chinese teachers emphasize abstract thinking after using concrete examples. Chinese teachers put great emphasis on mathematics content, process and students' learning when preparing lesson plans (Li et al. 2009). These studies raise an interesting question: What beliefs and methodologies do Chinese mathematics teachers value in teaching and learning?

Some mathematics education researchers may conclude that Chinese students are taught using "rote learning" or "repetition" (Leung 2001; Wong 2006). Leung (2001) identified features and underlying values in mathematics education in East Asian countries. He concluded that it has six dichotomies with Western perspectives. These are: product versus process; rote versus meaningful learning; studying hard versus pleasurable learning; extrinsic versus intrinsic motivation; whole class teaching versus individualized learning; and the competence of teachers: subject matter versus pedagogy. It seems East Asian countries "without an explicit theory of mathematics education, retain a distinctive way of teaching mathematics" (p. 37).

One important discovery about these East Asian nations is the domination of Confucian culture (Leung 2001). Confucian heritage Chinese culture, including family values and language (Wang and Lin 2005), and extrinsic motivation play an important role in education. Confucianism influences Chinese collective cognition and wisdom. To examine the impact of Confucianism on mathematics education, this chapter includes three sections: 1. Confucian philosophy in thinking, learning and teaching; 2. impacts of Confucianism on Chinese mathematics education; and 3. distinctive features of Chinese mathematics teaching and learning.

22.2 Confucian Education Ideology and Chinese Culture

Confucian philosophy and educational ideology are deeply rooted in the culture of East Asian countries. They are mainly recorded in four books: *The Analects of Confucius*, *The Book of Mencius*, *The Great Learning*, and *The Doctrine of the Mean*. "By the late nineteenth century, the whole East Asian region was thoroughly 'Confucianized'; that is, Confucian values and practices informed the daily lives of people in China, Korea, Japan, and Vietnam, and whole systems of government

were justified with reference to Confucian ideals" (Bell and Chaibong 2003, p. 1). In China, many idioms and old sayings are from Confucian books such as the amalgamation of learning and thinking. This section describes Confucian philosophy on learning, thinking, and teaching.

22.2.1 Confucian Perspective on Learning and Thinking

Confucius understood the importance of environment and practice. Confucianism holds that when people are little children they are similar to one another by nature, but because of different environments and practices, they diverge in their growth (Analects, 17.2). People can become different through learning and practice.

Two essentials of learning are diligence and humility (Chen 1990). According to the Analects, Confucius was thought to be the most diligent learner; he learned from reading, peers and all possible resources. Confucius said, "When I walk along with two others, they may serve me as my teachers. I will select their good qualities and follow them, their bad qualities and avoid them" (Analects, 7.21; trans. by Legge 1971, p. 202).

Confucius encouraged reviewing old knowledge. "He cherishes his old knowledge, and is continually acquiring new" (Analects, 2.11; trans. by Legge 1971, p. 423). People, on the basis of what they have been told, will know its proper sequence of what will happen (Analects 1.15). In contemporary life, people usually recall what they have learned to acquire new ideas.

When Confucius encountered novel problems, he tried to understand their two ends: what he knew, and what he needed to know or to solve, and from these two ends he approached the solution (Analects, 9.7). Confucius thought that learners attained knowledge through learning and critical thinking. He said: "Learning without thought is labour lost; thought without learning is perilous" (Analects, 2.15; trans. by Legge 1971, p. 150).

The five steps of learning are to study extensively, inquire accurately, think carefully, discriminate clearly and practice earnestly (Confucius, The Doctrine of the Mean, 19–21). The first two steps belong to the learning process. Thinking carefully and discriminating clearly are the thinking process. Earnest practice is the process of applying knowledge (Chen 1990). Zhu Xi's (1130–1200 AC) annotation of Confucius' Analects used "know how, and also know why" for knowing and understanding.

Contemporary people interpret Confucius' idea of the learning process as a spiral progression, that is, "learning → inquiring → thinking/reflecting → indentifying/discriminating → applying/doing → learning …" as illustrated in Fig. 22.1.

The Confucian view of learning also indicates that people should learn widely, but they need critical thinking. What people learn should combine with reality and be localized. After learning, people should apply their knowledge to solve problems in order to check that what they have learned is correct.

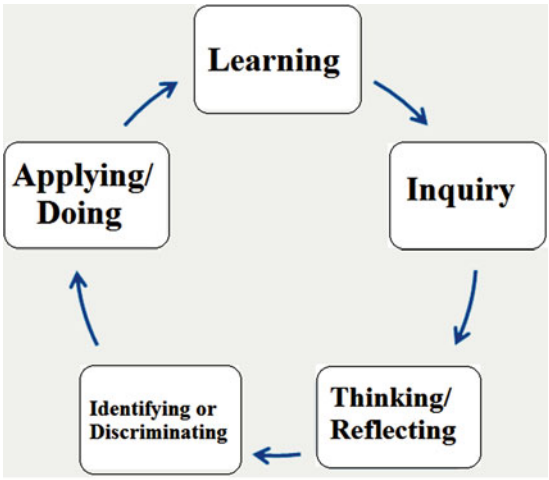

Fig. 22.1 Confucius' concept of the learning process

22.2.2 Confucianism Perspective on Teaching

22.2.2.1 Teachers' Role and Quality

Confucianism defines a teacher as 'the icon of others', according to Yang (52 BC–18 AD) (Leung 2001). Han Yu (768 AC – 824 AC) stated in his article *On Teachers,* "Teachers transfer good moral standards, teach knowledge, and solve students' puzzles". According to Confucius' perspective, if someone wants to be an artisan, the person must have knowledge of what he/she works on (Analects, 15.9). A Chinese old saying is that if teachers want to give students one cup of water, they should have one bucket of water of their own. Hence, Chinese teachers are required to have subject matter knowledge in depth, breadth, and throughout in their teaching field.

22.2.2.2 Teachers' Attitudes Toward Students and Teaching

Confucius thought that people have equal rights to be educated (Analects, 15.38). He also presumed that people were teachable (Chen 1990). Moreover, Confucius and his lineage accept the view that people have different abilities and interests. Confucius advocated differentiated education. According to students' interests, talents, cognitive abilities and characteristics, Confucius used different approaches to help students learn. Many vivid differentiated teaching stories of Confucius were recorded in the book *The Analects of Confucius*. His method to teach diverse students was "to those whose talents are above mediocrity, the highest subjects may be announced. To those who are below mediocrity, the highest subjects may not be announced" (Analects, 6.19; trans. by Legge 1971, p. 191).

Confucius guided students' learning "by orderly method, skillfully leads men on" (Analects, 9.10; trans. by Legge 1971, p. 220). Confucius also advocated that teachers should be "instructing others without being wearied" (Analects, 7.2; trans. by Legge 1971, p. 195). Teachers should have patience with students, recognize students' ability, and induce students to learn step by step.

Confucius used a heuristic teaching method to help students' learning (bu fen bu qi, bu fei bu fa; Analects, 7.8). Zhu Xi (1130–1200 AC) interpreted Confucius' heuristic teaching as follows. Learners with "*fen*" status are eager to understand the meaning or approaches after they elaborate on a topic but they do not find a proper way to make explicit the meaning. Learners with "*fei*" status have been thinking for a certain amount of time but their thoughts are not very clear. They want to express their ideas but they cannot find suitable ways to express themselves. When students have *fen* and *fei* statuses, teachers should begin to guide students' learning.

Confucius paid attention to students' understanding and acceptability. If teachers teach one corner of content, and students cannot develop the other three corners of the content from it, teachers should not repeat the lesson (Analects, 7.8). In contemporary Chinese professionals use the idiom derived from this idea, they teach with various approaches, and make teaching flexibly.

Teacher's professional development also means learning from teaching. The idea originally is from the Analects, but Classic of Rites on Learning (liji · xueji (18), 100BC–1BC) explicated the idea and shaped an idiom: jiao xue xiang zhang. It tells us that teaching and learning interact with each other. By learning, a person is able to know what he lacks in knowledge; by teaching, a person is able to find difficulty because of the deficiency in his knowledge. By knowing his deficiencies in knowledge, a person is able to re-examine his flaws, then continues learning to correct these deficiencies. When a person knows the difficulties and the limitations when presenting his ideas, then he is motivated to learn. Hence, teachers can improve their knowledge by teaching. This learning from teaching also shows the equal positions between students and teachers.

In summary, Confucius and his lineage have developed some important ideas about teaching, learning and thinking. These ideas discussed above have become idioms and old sayings, which guide people in learning and teaching. In fact, these are effective approaches for teaching and learning. These ideas have strong impacts on Asian teachers and learners.

22.3 Impacts on Chinese Mathematics Teaching and Learning

The Confucian ideology of learning has made Chinese scholars and learners open their minds to learn knowledge from other countries. Chinese mathematics educational scholars have assimilated modern Western theories, and localized and developed theories to accommodate Chinese education. Based on the perspectives

Confucian ideology, we can draw implications about mathematics teaching, learning and teacher's knowledge. In this section, I will focus on three aspects: (1) how Chinese scholars integrate their tradition with Western theories in mathematics education; (2) the characteristics of Chinese mathematics teaching and learning; (3) the quality of Chinese mathematics teachers.

22.3.1 Integrating Chinese Traditional Ideology with Western Theories

Chinese educators learn and accept Western education theories. They assimilate Western theories into the Chinese environment of teaching and learning. For example, Chinese curriculum, pedagogy, and research books (e, g., Tu et al. 2011; Zhong 2003) include ideas from scholars in China and other countries. Wang (1985) called for fusing Eastern and Western perspectives for better education. The book, *30 years Chinese mathematics education research* by Tu et al. (2011), indicates that the principles of Chinese mathematics education are based on Chinese tradition and are influenced by Western theories.

Chinese mathematics education system not only keeps its traditional methods of teaching and learning, but also introduces Western methods and theories. In the 1950s, the Russian mathematics education system was introduced to China. In the last three decades, Chinese mathematics education theories have also absorbed valuable Western perspectives on curriculum, thinking, teaching, learning and problem solving strategies (Ma and Hu 1996; Tu et al. 2011; Zhang et al. 2003; Zheng 1996, 2006).

A few examples are listed below to illustrate the integration of Western thought and theories with Chinese mathematics education. Many Chinese scholars study and use Polya's plausible, heuristic methods and strategies in K-12 mathematics education. For example, Yuxin Zheng's books *Mathematics Methodology* (1996) and The *Introduction of Mathematics Methodology* (2006) include a large discussion of George Polya's ideas on mathematics thinking and learning. The two books also include some ideas from Imre Lakatoes, Hans Freudenthal and other mathematics education scholars on mathematics thinking and methods.

The Mathematics Pedagogy by Ma and Hu (1996) consists of eight chapters. They are: the principles of mathematics education, mathematics thinking, mathematics aptitudes, mathematics logic, mathematics thought, mathematics methodology, mathematics teaching methods, and the quality of mathematics teachers. The content includes Eastern and Western concepts. For example, the seven principles of mathematics education in Chap. 1 comprise both Confucian and Western such as step by step learning, learning orderly knowledge, heuristics, process, induction and deduction, mathematics for all, inspiration and motivation. The seven principles in this book synthesize both Chinese tradition and Western methods and strategies

together. For example, the idea of mathematics for all is accepted by both Eastern and Western educators.

22.3.2 Characteristics of Chinese Mathematics Teaching and Learning

The major characteristics of Chinese mathematics teaching and learning focus on three areas: the "two basics", heuristic teaching, and efficacy. The "two basics" are subject matter knowledge and mathematics pedagogy. Heuristic teaching and efficacy are mathematics pedagogy.

22.3.2.1 Two Basics

The Chinese mathematics education community emphasizes an understanding of the "two basics" when teaching mathematics. These "two basics" refer to basic knowledge and basic skills. Basic mathematics knowledge includes concepts and fundamental mathematical ideas and methods. Basic mathematics skills include computation, data processing, reasoning, drawing tables and figures that follow specified procedures, and familiarity with solution patterns, memorizing certain basic solution patterns, and using them on similar problems through fast imitation and transfer (Tang et al. 2012; Zhang et al. 2004). The basic skills include procedural knowledge, mathematics thinking, and problem solving strategies. Teachers require students to grasp the two basics. Since the 1950s, the Chinese mathematics curriculum framework has been revised several times. The "two basics" have always been kept in the framework (Li 2013).

The two basics emphasize the mathematics core content which should be grasped by students. Zhang (2006) summarized the foundation of two basics development and its three vertical levels. It is based on the following four perspectives of Chinese scholars: (1) understanding via good memorization of knowledge; (2) high efficiency of learning through skillful use of knowledge; (3) abstract thinking through rigor; and (4) repetition relies on multiple variations which include concept variations, process variations and task variations. The two basics also have three vertical levels: (1) fundamental knowledge and skills (the two basics); (2) the module of knowledge, consisting of knowledge coherence and connection, variation teaching, and mathematics thought and methods; and (3) mathematics thinking, thought and methodology.

The two basics are related to the goals of mathematics education. The goals are to develop students' mathematics abilities in calculation, logical thinking, spatial understanding and creativity (Meng et al. 2011). The first three abilities have been recommended for more than half a century, and the creativity was added in recent decades. The emphasis on the "two basics" are similar to the ideas of the Western

scholars Polya (1945/1957, 1965) and Milgram (2007), but in practical teaching, some countries may not emphasize them enough (Milgram 2007; Polya 1965).

22.3.2.2 Chinese Mathematics Teachers' Heuristic Teaching

Confucius' heuristic teaching is very popular in Chinese education communities. The heuristic teaching method requires mathematics teachers to induce students to learn actively, to stimulate their incentive to think and make conclusions. In mathematics teaching, heuristic teaching strategies integrate Confucian heuristic methods, mathematicians' thinking and thought, and education theory. For example, Chinese textbooks usually use incomplete inductive reasoning to introduce the concepts and procedures of mathematics operations, especially in elementary and middle school mathematics. Thus, teachers lead students from concrete thinking to abstract thinking. In addition, Polya's (1945, 1965, 1968) methods of problem solving are used in heuristic teaching, for example, plausible inference, generalization, specialization, classification, analogy, dividing tasks into subtasks and so on. Chinese heuristic teaching not only teaches mathematics content and problem solving skills, it also teaches mathematics thinking and mathematics thought.

22.3.2.3 Efficacy

Efficacy has two sides: learning efficacy and teaching efficacy. Teachers need to make sure students understand and complete the curriculum requirements. The mathematics community advocates that teachers should play the dominant roles in classes while students should be active participants in learning and thinking in classes (Wang 1985; Tu et al. 2011). The purpose of this is to make sure students understand mathematics knowledge and avoid time consuming on some content, and make sure that the tasks of teaching are completed. The major role of teachers is to inspire students' thinking while students need to think actively and respond to teachers' instruction. This point of view matches Polya's (1965) three principles of teaching and learning. Those are active teaching and learning, best motivation, and consecutive phases.

22.3.3 Quality of Mathematics Teachers and Teaching

Because of the Confucian view that a skillful craftsman should sharpen his tools, an old Chinese saying is that teachers should have "one bucket of water" for teaching "one cup of water"; mathematics teachers must have profound subject matter knowledge and pedagogical content knowledge. The emphasis on the two basics, heuristic teaching methods, and efficacy in teaching require teachers' strong knowledge of subject and pedagogical strategies. Mathematics teachers have to elaborate

upon mathematics problems in order to understand what they teach and what difficulties learners may encounter. They must try to show students various approaches to solving mathematics problems. They also must find possible mistakes when students solve mathematics problems and correct them. They should skillfully control class teaching and the pace of learning. In this way, Chinese traditional thought matches Shulman's (1985) view about teachers' knowledge that "a teacher requires extensive and highly organized bodies of knowledge" (p. 47). Ma's (1999) research provided evidence of Chinese mathematics teachers' knowledge in subject matter and pedagogy.

22.4 Distinctions of Chinese Mathematics Teaching and Learning

The integration of Confucian education theory with Western education theory gives Chinese education its special model of teaching and learning. Some similarities and differences in teaching and learning between Chinese and Western education will be discussed below.

22.4.1 Similarities and Differences in Teaching

Some Confucian education ideas have been proved by the Western scholars through empirical studies. These are advocated by Western scholars (Hiebert et al. 2007). These ideas include that people have equal rights to be educated (Analects, 15.38), differentiated education, learning from teaching, teachers using multitasking, multiple solutions, and multiple approaches to understanding mathematics concepts, and analogy methods. Confucian heuristic teaching in fact is student-centered pedagogy. Constructivism also supports student-centered education.

The teaching techniques used by Chinese teachers are not new, and are recommended by American scholars, however, there existed the learning gap between the US and East Asian countries (Stevenson and Stigler 1992). Some methods may not have been noticed by Western researchers. For example, Chinese mathematics teachers and scholars also advocate that teachers should play dominant roles in classes while students should be actively thinking and learning. Chinese heuristic teaching sometimes cannot be depicted clearly. There is some tacit knowledge existed in Chinese teachers' classes, for example, the method of how teachers dominate classes and inspire students to think effectively. That is considered Chinese heuristic teaching or a student-centered approach. This method may include the teacher's own tacit knowledge. Hence, Chinese mathematics teachers observe exemplary teachers and peer teachers teaching (Huang et al. 2011, 2014; Ma 1999).

Chinese mathematics teachers' heuristic teaching is similar to Polya's (1965) view of "*inside help*". "*Inside help*" refers to "help as the problem solver earnestly concerned with his problem and familiar with methodological ideas has a good chance to find by himself" (p. 137).

Constructivists believe students are active learners while Confucius classified four kinds of people who have different attitudes towards learning: some are born with knowledge, some enjoy learning, some learn when encountering a challenge, and some may not want to learn in any circumstances (Analects, 16.9). More over, the classic *Rites on Learning* (li ji. xue ji; 100BC–1BC) reminds teachers of four kinds of failures in learning. Learners may fail by learning too much, too narrowly, too easily, or by being satisfied with current achievement. These four failures of learners have different psychological causes. Teachers should know them, and then correct students' failures (trans. by Wang 2001, p. 519). Hence, Chinese teachers may often challenge students or force them to learn such as by memorizing some content. Teachers also teach skills on how to memorize. To this point, some Western scholars may not encourage memorization enough. This difference may lead to teachers from Western and East Asian countries using different pedagogical methods in teaching (Leung 2001).

The Confucian five steps of learning underlie the relationship between learning and thinking. Teachers teach both knowledge, problem solving techniques and thinking skills. Polya (1945) reminded authors of textbooks that students and learners "are not satisfied by verifying that the steps in reasoning are correct, but also want to know the motive and the purpose of the various steps" (p. 50).

22.4.2 Similarities and Differences in Learning

In mathematics education, Chinese mathematics teachers focus on "two basics". According to Leung (2001), "the underlying belief is that the content is fundamental. The critical attribute of mathematics is its distinctive knowledge structure, and it is this distinctive structure which distinguishes mathematics from other forms of knowledge" (p. 39). The "mathematical distinctive knowledge structure" is related to the mathematics content system. It is part of basic concepts. As Zhang and his colleagues (2004) described, "East Asian countries, including Japan, Korea, Singapore, and China (Mainland China, Taiwan, Hong Kong and Macao), even Russia, emphasize more the importance of laying the foundation" (p. 190).

Chinese "two basics" learning matches Bruner's (1960) structured learning. It also matches NCTM's (2000) conceptual understanding as well as procedure understanding, which is the view of some Western scholars (Wu 1999). The two basics also require teachers not only to teach mathematics content, but to teach thinking and learning strategies, how to analyze and solve problems, and how to memorize mathematics formulas and theorems. The "two basics" plus the Chinese heuristic teaching method help students learn mathematics content, thinking and problem solving skills and methods. To this point, some Western countries may not strongly

emphasize both conceptual and procedural understanding (Ma 1999). Although some Western scholars have recommended conceptual understanding, some Western countries may not take this practice seriously in teaching.

The Confucian five steps of learning, the integrating of thinking and learning, and solving problems from two ends are also recommend by Western scholars. Polya's four steps of problem solving (1945), "know that, know how and know why" have been supported by scholars. When we solve problems, we should know what we need to solve and what resources we have to solve the problems. Confucian learning from all possible resources matches contemporary education researchers' perspectives of learning from others, collaborative learning, learning from experience, and the use of the Internet and other resources.

Polya's (1945, 1965, 1968) heuristic strategies have provided great methods for mathematics learning, thinking and problem solving. The heuristic strategies include verbal and nonverbal aspects (Milgram 2007). The non-verbal parts of mathematics may be intuitive thinking (Bruner 1960) and "good ideas" (Polya 1945, p. 9). Chinese mathematics scholars have introduced his heuristics not only into learning, thinking and problem solving, they have also integrated Polya's ideas into their traditional heuristic teaching. This may help to explain the finding by Cai and Wang (2010) that Chinese teachers emphasize abstract thinking after using concrete examples while the US teachers use concrete examples to help students understand mathematics. To this point, it seems some North American teachers may not use nonverbal methods very often in class (Milgram 2007).

In sum, as human being, Eastern and Western scholars share some common ideologies in education. Because of living environment, culture-heritage, politics issues, the similar perspectives of education may have different interpretations in different cultures. This may lead to the distinctions of Chinese mathematics education.

22.5 Conclusion

Confucian philosophy in teaching and learning has deeply influenced Chinese collective cognition, wisdom and memory, and has had profound impacts on Chinese mathematics education. Confucianism, including epistemology, dominates the philosophy and values of Chinese culture. The success of Asian students in K-12 mathematics education may be attributed to Confucianism (Clements et al. 2013; Leung 2001, 2006).

Chinese mathematics education has its ideologies, which guides Chinese scholars to integrate Chinese traditional and Western perspectives and develop their teaching and learning styles. Some Chinese education ideology is hidden in Chinese culture. It seems Chinese scholars do not think Confucian ideologies need to be examined by empirical studies. They have already accepted them. Hence, it may seem that the Chinese education system is "without an explicit theory of mathematics education" (Leung 2001). In contrast, Western scholars do empirical research

and amass their findings into education theories. These theories at some level overlap with Confucian education ideologies. In fact, Chinese scholars also do empirical studies of how to apply Confucian educational theories in mathematics education. The mathematics educational journals in Chinese include many articles related to apply Confucian ideas in mathematics teaching and learning.

Chinese mathematics teaching and learning have their own distinctions, which can be summarized to include five aspects: (1) equality in education and equity intelligent development; (2) teachers' profound knowledge in subject and pedagogical content; (3) focus on "two basics" including mathematics content, structure and systematic; (4) heuristic teaching with content, thinking and learning skills and mathematics thought; and (5) teaching efficacy. These distinctions are built on Chinese traditional culture and integrated Western scholars' perspectives.

Among the five aspects, "two basics" and "heuristic teaching" are most important. The former requires not only conceptual and procedural understanding, but mathematics thinking, learning skills and strategies for problem solving. Heuristic teaching requires that teachers use induction, analogy, generalization, specialization, classification, reinvention, induction, and proofs and proving. All these possible strategies are used to inspire or stimulate students' thinking to achieve the best effects of teaching and learning. The two distinctions help Chinese mathematics education to reach its goal to develop students' computation, logical thinking, spatial abilities, and creativity. Therefore, the key aspects require teachers to have strong subject matter knowledge and pedagogical content knowledge for teaching efficacy.

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Chapter 23
A Case Study of a Chinese/English Dual Language Program in New York City

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Abstract This paper aims to review a Chinese/English Dual Language model in the U.S. The Chinese/English Dual Language program is a relatively new, but promising and fast-growing, language model to foster bilingualism in the context of U.S. education. This paper first provides the rationale for the study and then, an overview of the bilingual educational models currently available in the U.S. with elaboration on the Dual Language model. This study adopted a mixed method approach. Teacher interviews, classroom observation and field notes were collected for qualitative data analysis. Quantitative data includes the descriptive statistical analysis on the Chinese and English literacy materials currently available at the school. The Chinese/English Dual Language model informs the heterogeneity in Chinese educational models. The study discusses the development of the program, its challenges, and the significance and implications of the Chinese/English Dual Language model to Chinese education. The paper calls for greater resources and support from policy makers, educators, and administrators to further strengthen the model.

23.1 Introduction

The Chinese population in New York City is on a steady rise. According to the 2010 census data, Chinese group makes up 6 % of the city population with a 10.5 % (2008–2010) growth rate, exceeding other ethnicities (Asian American Federation 2013). With the large number of Chinese-ethnic population comes the question of how their educational needs can be met, especially how the language education in Chinese language, culture and heritage can be maintained, if not promoted.

For many Chinese parents residing in the U.S., maintaining their children's proficiency in Chinese language is an ongoing aspiration and struggle (Carreira 2004; Garcia 2000; Mckay and Wong 1996; Valdés 2001; Wiley 2000; Wong Fillmore 1991, 1993, 2000). Official school curriculum in the U.S. rarely provides support in heritage language learning to the Chinese families, compelling them to often resort

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to weekend Chinese schools. The effect of weekend heritage language school, however, is contested (Cho 2000; Lee 2002; Lee and Shin 2008; You and Liu 2011). Research has well documented the predicament in heritage language schools, ranging from outdated curriculum, shortage of the qualified teachers, lack of interest from the students and pedagogical misalignment between the curriculum and the needs of the America-born youths (Cho 2000; Lee 2002; Zhou and Bankston 1998). In addition to the possibility of losing the heritage language, immigrant families often find acquiring English another challenge (Gil and Bardack 2010). For children whose first language is not English, New York City Department of Education (New York City Department of Education 2013) currently offers three choices to support their English language learning: ESL program (Freestanding English as a Second Language), TBE program (Transitional Bilingual Education) or DL program (Dual Language Education). ESL program puts the newly arrived children in an all-English environment without any support in their native language. Children are expected to learn, if not master, social and academic English and navigate through all subjects and the learning landscape by themselves. Such approach has been widely criticized as a "sink or swim" option for its lack of native language support. Children are left to be on their own and need to survive in the system with limited, if any, English skills. In terms of learning English, research has shown that such approach is less effective than the bilingual program where the native language is provided (Cummins 1979; Thomas and Collier 2004). In addition, in the assimilation process, bilingual children risk losing their heritage language and their ethnic identity (Zhou 1997). Recognizing the shortcomings of the ESL model, TBE (Transitional Bilingual Education) model was developed to offer native language support for bilingual children. However, native language support is usually only offered in the beginning phase of the learning as a "transitional" means. Thus, children may experience a smoother start in the TBE program. But, such support is very short-lived and the aim goal is to acquiring English only. Therefore, TBE program's end result is similar to that of ESL in which bilingualism is downgraded to monolingualism.

Under the ESL program and TBE program, bilingual children not only lose the opportunity to maintain their heritage language, the effectiveness of English learning is also questionable (Thomas and Collier 2003). DL (Dual Language) model emerged as the third option in that it not only effectively advances children's English acquisition but also corroborates native language learning for minority children by incorporating heritage language learning in the official educational system. It should be noted that while DL model provides the access for heritage language acquisition, it also attracts children of other linguistic and cultural backgrounds, further enriching the DL program. This paper aims to present a Chinese/English dual language program in New York City in the U.S. The integration of the English curriculum and Chinese curriculum creates a new hybrid education model combining two languages and cultures, suggesting heterogeneity among Chinese education models. The hybridity also presents its challenges in the negotiations and tensions within the program. The author of this article hopes that through this article, conversations can be initiated on alternatives in learning Chinese language.

23.2 Theoretical Framework

In the context of this study, Dual Language Learners (DLL) are those who speak any language other than English at home and therefore may not be fluent in English language. This term was first adopted by the Office of Head Start and the United States Department of Education with an objective to bring into focus and promote the linguistic capabilities of children who speak languages other than English (Espinosa 2013). Dual language program creates a win-win situation for learners as both native English speakers and native speakers of the partner language to learn two languages through the course of school learning. It is a developmentally-appropriate, language-enriched and culture pluralism-embedded bilingual/bicultural education program. Through rigorous content-area instruction and peer interaction in both languages, students who are native English speakers and native speakers of another language acquire content-area knowledge and skills and support each other to reach academic expectations in both languages. Students are expected to build academic skills in their first language and eventually transfer these skills to the second language and be highly skillful in the four domains, speaking, listening, reading, and writing, in both languages upon their completion of a DL program (New York City Department of Education 2013).

Dual language programs are also known as two-way bilingual program. Dual Language programs provide students with an academically rigorous curriculum in two languages, enabling both ELLs (English Language Learners, or ESL students) and English Proficient (EP) students to meet, if not exceed, curriculum standards. The linguistic competency and cross-cultural skills students in DL program will prepare them to function in a global society (Howard and Christian 1997). Students in Dual Language programs develop their second-language skills while learning content knowledge in both languages. The typical type of class is a mix of native English speakers and native speakers of the partner language. However the proportion of the mix is highly debated in the literature. While a few argue that 50:50 is the ideal proportion of a Dual Language learning program i.e. where half of the students are English speakers while the remaining are native speakers of the partner language; others argue that variations to this proportion are feasible. Some even propose to keep one linguistic group in majority while others contend that this ratio of mix of students should be no more than 2:1 (Torres-Guzmán et al. 2005). For instruction format and schedule, one bilingual teacher in both languages can be assigned to teach in both languages to children. Or, in the team-teaching configuration, there are two classes that receive instruction from two teachers. One of the two teachers in the team is assigned to provide instruction in English and the other teacher, in the partner language. There are two separate classrooms for instruction in each of the two languages. Students alternate their time between the two classrooms. The two teachers plan all instruction together in order to meet the academic and linguistic needs of and objectives for all the students. In terms of the time organization, various models, such as half-day model, roller-coaster model, and alternating day model, exist to strive for even time distribution between two

languages (Torres-Guzmán et al. 2005). The amount of instructional time in 50:50 models is equally divided between the two languages. Each of these models has their own advantages and shortcomings and no consensus has been reached on the supremacy of a particular form (Honigsfeld and Dove 2010). Thomas and Collier (2003) suggested that a dual-language program provides minimum 6 years of learning of core academic curriculum. An effective DL program also ensures separation between the two languages and that there is no overlapping in the form of repeated lessons and translations. Both English and the partner language are taught at the cost of single language hence there is no extra spending. For a dual language program to thrive, it is vital to have support from administrators, teachers and parents and positive interdependence among peers.

DL model prizes itself over the achievement of respecting and broadening children's culture by actively engaging children of diverse background. In terms of the Chinese/English dual language model, it offers Chinese immigrant families an official path to preserve and promote Chinese language and culture learning for their children. For non-Chinese students, the DL modelprovides them exposure to Chinese language and culture. This hybrid program, operated under the official U.S. educational policy, spawns an alternative model in learning Chinese. On the contrary, the ESL and TBE models' heavy, if not sole, emphasis on English language learning at the expense of Chinese language learning deprives ethnic Chinese students' opportunity in preserving heritage language. Chinese language learning is rarely supported for children in the ESL and TBE program and children usually lose their Chinese language skill during their schooling. On the contrary, upon the completion of the DL program, children are expected to possess high language proficiency level and academic skills in both languages. Dual language programs are recognized as a promising means of promoting biliteracy and positive cross-cultural attitudes among learners. In an increasingly bilingual/multilingual world, the growth of dual language schools is evident. In year 2000, there were about 260 schools that offered various language pair DL programs in the U.S. Today, around 2000 schools offer dual language program and 300 of these schools are operating in New York State (Walser 2011). With the linguistic skills and cultural knowledge, children can gain an advantageous edge in the job market, play a major role in the international trade sector and contribute to the growth of the nation's economy. Consequently, it is not surprising that DL program has attracted interest, attention and funding from the public (Walser 2011). For Chinese children growing up in Asia, Chinese is acquired as a first language; for Chinese children residing in the U.S., Chinese language is mostly learned at home as a social language with emphasis on oral interaction. The DL program aims to promote academic language learning, literacy, and content-based knowledge in both languages. It provides an alternative Chinese education model aside from teaching native Chinese speakers Chinese as a first language, demonstrating the heterogeneity of Chinese educational model.

23.3 Methodology

The current study adopts a mixed-method design in which both qualitative and quantitative data are collected and analyzed. The study collects data through four teachers' interviews; 30 classroom observations in 2 years, and literacy material count from Kindergarten to the fourth grade. One teacher from each grade in the dual language program was interviewed. One respondent at a time was interviewed and every single interview lasted an hour. The interview started with general questions on teachers' professional backgrounds and experience in the dual language program followed by teaching activities and workload. The interview questions progressed to further understanding of the challenges in the dual language program, the curriculum in each specific grade, the impact of New York State tests on ELA (English Language Arts), Math and Chinese, Chinese literacy material supply and professional development support teachers receive. Finally, inquiry on parental support and participation and challenges for the DL program concludes the interview. The interview protocol is included in Appendix 23.1.

The participating school actively promotes multilingual and multicultural competency and diversity. Fifty percent of the students of the school population are Hispanic, 35 % Asian, 9 % Black and 4 % White. Seventeen percent of the students are English Language Learners and 21 % are in Special Education. The participating school started the Mandarin Chinese/English dual language program in 2010. The program is open to any students who are interested in learning both English and Chinese languages and it has attracted students of diverse ethnolinguistic backgrounds. Although ethnic Chinese students make up the majority of the class, children of other ethnic groups also enjoy a sizable presence in the program. It should be noted that within the ethnic Chinese groups exists considerable diversity. For example, children of second or third generation Chinese-American origins are usually limited in their exposure to and experience with Chinese culture or language. Even within the first generation immigrant children, the geographical origins, socio economic status, and dialects used at home or access to Mandarin Chinese also vary widely.

In terms of the grade level, the school started with a kindergarten class and currently it has grades from Kindergarten through the fourth grade. A designated 30–45 minute program in English as a Second Language or Chinese as a Second Language period is included each day to support students in need of additional support. The school adopts a side-by-side dual language model: Each of the English teacher and Chinese teacher has their own classrooms and students spend alternate days with both teachers. Paraprofessionals and parent volunteers assist teachers in the classrooms. Student teachers from teacher preparation programs in the universities in New York City also work with the classroom teachers to gain their experiences and support children's learning. In its 5th year of providing a Chinese/English dual language program, the school considers academic excellence and bilingual proficiency in English and Chinese for children in the dual language program.

23.4 Findings

In the Chinese classrooms, big posters exhibiting Chinese phonetic symbols, characters, classroom schedules, rules and academic terms are clearly written in Chinese and displayed around the classrooms. Every student has a Chinese name posted on the entrance door and on children's working desks. Students' work, such as compositions, drawings, artwork, and Chinese calligraphy, decorate the classroom walls and hallway. The school celebrates Chinese holidays in their curriculum and incorporates fieldtrips to enhance students' understanding of the Chinese heritage, community, language and culture.

In terms of the curriculum, the Chinese curriculum is a combination of mirroring that of English reading curriculum and conventional Chinese character learning model. Shared reading, guided reading and independent reading, the three components in Readers and Writers' Workshop, make up the core English literacy curriculum in the participating school. Under such a model, children are expected to read extensively as their major literacy learning curriculum. Books of diverse subjects, interests, styles, and genres are the integral and critical part of the literacy program and children are regularly assessed on their reading progress through literacy evaluation and teachers' observation. Textbooks have a minimal presence in the curriculum and are used only as a guiding means. The reading curriculum in the Chinese component follows the Readers and Writers' Workshop model of the English curriculum. This is a major departure from the textbook oriented approach in conventional Chinese education in Asia. Utilizing reading-based curriculum in teaching Chinese literacy suggests another alternative in the Chinese educational model and at the same time brings forth challenges for the teachers and curriculum. The challenges will be addressed in the later sections.

For Chinese character learning, the school follows conventional methods in which memorization, drill, and radical recognition are emphasized. The school adopts simplified Chinese with pinyin system, though books in traditional Chinese can also be found in the classrooms. Kindergarteners are introduced to mostly pictograph characters and are expected to recognize approximate 100 Chinese characters. First graders start learning about radicals and correct stroke sequences. Second graders continue to build up Chinese character by learning radical groups. The complexity and quantity in Chinese character learning increase as children move up to third and fourth grades. By the end of the fourth grade, students are expected to recognize approximately 600 Chinese characters. In terms of Chinese character writing, kindergarteners start out to write about 80 Chinese characters. By the 4th grader, children are expected to be able to write 400 Chinese characters.

Since the DL program operates under U.S. educational model, the pedagogy, classroom practices, classroom interaction, classroom management and expectations follow U.S. practices. Student-centered learning is implemented throughout the curriculum where group work is interwoven across subjects. Critical thinking skills are developed through the group work and interaction between teachers and students and among the children themselves. Peer support is much emphasized and

students are encouraged to take ownership in their learning. Students are assessed through class observation, project, class participation, report, homework, and occasional tests, aiming to provide a comprehensive overview on students' strengths, areas needing support and their learning process. Classroom management builds on the mutual respect between teachers and students. With the implementation of the culturally responsive pedagogy, the students and teachers create classroom rules and students learn to resolve conflicts with their peers to foster a positive learning environment.

All the academic subjects, Math, Literacy, Social Studies, and Science are taught both in English and Chinese languages at the participating school. Through the integration of languages and subjects, children are expected to reach advanced academic language competency. The peer interaction in dual language program is an integral and critical part in the success of language acquisition. Peer interaction facilitates and reinforces literacy learning and provides authentic learning opportunities for children's language acquisition (Parkes et al. 2009). In the observation of the participating school, interactions in both the host language, English, and the partner language, Chinese, flow spontaneously among children, with topics ranging from asking confirmation on the academic work to social events, such as arranging a play date, sharing snacks, exchanging toys, and borrowing pencils. The topics and contents are closely connected to children's life and learning, embodying purposefulness in the language acquisition. The diverse linguistic registers and structures further enrich the children's experience with Chinese language. Children learn to ask and listen to questions, provide and receive feedback, negotiate, resolve conflicts, or amend situations, in both English and Chinese. Since everyone is a language learner in either Chinese or English, children develop a positive and collegiate attitude towards learning and supporting their peers. The students in the dual language program come from diverse ethnic and linguistic backgrounds. Although students who reside with Chinese-speaking family members may have exposure of Chinese language at home, such a condition is not a prerequisite in excelling in the DL program. Non-Chinese ethnicity families are proactive in supporting their children's Chinese learning through close communication with teachers, extra-curricular enrichment, and afterschool program or tutoring.

Despite the impressive progress of the children, the dual language program at the participating school faces several challenges. Among them are the lack of uniform benchmark and curriculum across schools, the status of the Chinese assessment in the New York State test, and the transition into dual language program in the secondary education, the heavy workload for the Chinese teachers and the severe shortage of Chinese literacy materials.

The first challenge lies in the lack of uniform curriculum and benchmark assessment within DL programs. Unlike other subjects where the Common Core Standards clearly delineates the expectations and benchmarks for each grade, there are no clear curriculum or assessment standards for the Chinese subject in the DL program on a local or national level. Teachers at the participating school create their own curriculum and benchmark assessment, resulting in inconsistent academic expectations for each program. For DL students transferring to or from other DL programs,

their academic levels can vary significantly due to the lack of uniform curriculum, posing challenges for the transition process. When being asked about the collaboration with other Chinese/English dual language programs in New York City, all the teachers expressed that there is no uniformity in curriculum and assessment and no collaboration among the existing five Chinese/English dual language programs.

The second challenge concerns the high-stakes State Examination. In New York State, children starting from the third grade take statewide tests in English, Math, Science and Social Studies. The results of the tests are used to evaluate student progress and school performance. The data becomes part of the school statistics and is made available to the public. The Chinese subject test was first offered in academic year 2013–2014. However, under the current policy, the result of the Chinese test is not included in either student progress report or school performance. In other words, it does not carry official weight in the system. This has brought significant impact on the Chinese program in the participating school. As one teacher expressed, "Since this is not counted, I have to spend more time on English and Math test preparation. Parents also want more preparation for English and Math. So, Chinese is secondary." The other teacher concurred that this issue has also taken a toll on the Chinese learning time. Parents also request more effort spent on preparing for the English assessment. Regardless of their ethnic backgrounds, these parents are in such a conundrum. On the one hand, they share the aspiration of promoting Chinese language learning for their children; on the other hand, they are also under the constant realization of English being the "more important" language, manifested by the high stakes test.

The status of the Chinese subject state assessment has raised concerns from the community and impacted the sustainability of the DL program. In examining the Chinese/English dual language programs in NYC, it is noted that the majority of the programs concentrate on elementary school level. Currently, there are five Chinese/English dual language program elementary schools that offer dual language program but only one middle school and two high schools that offer such a program. Although the smaller number in secondary school might be the fact that dual language program is still at the inception stage and time is needed for the program to grow into the middle school and high school, the shrinkage of enrollment in the higher grade within elementary school is alarming. In the participating school, there are 26 children in kindergarten; 22 in first grade; 19 in second grade; 18, in third grade and 18 in fourth grade. The interviews with teachers corroborates the decreasing pattern, "As kids grow up, we tend to lose them … some parents want kids' English to be better. Since Chinese is not as important as English, parents think Chinese is only for younger grades. When the kids are little older, they cannot afford to spend more time on learning Chinese." This phenomenon seems to be even more salient among the new immigrant families where parents are not able to support children's English development at home, according to the teachers. The participating school is an elementary school, but the teachers have already expressed concerns about their students' continuation of dual language program onto secondary education because "If there is no middle school to continue, what good is it for their kids to spend time learning Chinese?", questioned by a teacher. Another Teacher

added, "Continuation to middle school is a problem. If there is no middle school and high school, the effect is highly discounted."

The emphasis on the English language test preparation and the dwindling enrollment in the higher grades and secondary schools corroborate research on the English hegemony. For many bilingual families, maintaining their heritage language has been an uphill battle since English is the official language, and its power is reinforced via hegemony (Carreira 2004; Wong Fillmore 1993, 2000; Garcia 2000; Valdés 2001). As Wiley (2000) explained, 'linguistic hegemony is achieved when dominant groups create a consensus by convincing others to accept their language norms and usage as standard or paradigmatic. Hegemony is ensured when they can convince those who fail to meet those standards to view their failure as being the result of the inadequacy of their own language' (p. 113). The pull towards assimilation is strong, which contributes to language shift in many bilingual families (Wong Fillmore 1991; Veltman 1988, 2000). Wong Fillmore (1991) contends that in linguistically and culturally diverse societies like the U.S., children from immigrant families must learn English, the de facto language of the society, so that they stand a chance to advance in their academic career and gain employment mobility. While this is true, learning English should not displace or replace the primary language in bilingual children. In other words, second language learning does not need to result in the loss of the primary language. However, language-minority children usually encounter powerful forces for assimilation upon entering the English-speaking world in the schools, and this disheartening phenomenon seems to be the norm in the U.S. Thus, becoming bilingual in the United States is a subtractive process in that acquisition of English takes place at the expense of the erosion or loss of the primary languages (Lambert 1975, 1977, 1981). Brecht and Ingold (2002) also argued that language dominance propels many bilingual families in the U.S. to shift toward English in predictable patterns such that children born in the U.S. to first-generation immigrant families often move quickly to English before or at the onset of schooling. Although the DL model attempts to minimize these issues, from the present data, it can be said that English hegemony force is still strong and much is left to be desired to reach the equilibrium between the Chinese and English languages.

Another challenge in the dual language program is the heavy workload on the Chinese teachers. Dual language is at a pioneering stage that little precedent exists for the teachers to follow suit. Teachers from dual languages program very often need to create their own curriculum, assessments and literacy materials. From the examination of the literacy material, it can be found that teachers at the participating school often translate English books into Chinese books, develop their own textbooks and workbooks, and produce their own classroom decorations, materials for word walls, and even the grid paper for Chinese character writing. The teachers all agreed that "Workload is a lot. We have to write and design materials." Furthermore, the lack of Professional Development from school or district is another major challenge. School and district do not seem to be equipped to provide Professional Development support to the teachers. "Professional Development from district is really scarce. We have no support.", expressed by another teacher. Combining the

heavy workload with the lack of support, the work for Chinese teachers in the dual language program can be overwhelming. In addition to the structural challenges, the background of the DL teachers and their implementation of the new hybrid DL program are also worth noticing. All of the Chinese teachers in the participating school grew up in Asia and received traditional Chinese education where clear hierarchy in the classroom with teacher-centered curriculum and textbook-oriented approach reign. All of them received educational training in teacher preparation program in the U.S. The DL program affords the teachers to negotiate between learning cultures. It not only shapes the existing curriculum of the Chinese language learning model in the U.S., but also provides rich data for the preparation of and research on bilingual teacher preparation program in the U.S.

Finally, the shortage of quality Chinese literacy material seriously hampers the program. Literacy education in the U.S. centers on an extensive use of diverse literacy materials. Literary education is achieved through extensive reading in books to support students' level and nurture their interests in literacy. The role of textbook is to complement the rich literary experiences students are exposed to. The diverse texts affords children authentic and rich literacy learning exposure to vocabulary, grammar, punctuation, sentence structures, and comprehension. Children are assessed on their levels in the beginning of the semester and are constantly evaluated as the semester progresses. Children choose books according to their reading abilities and their own interests. Reading is a major component of the curriculum where children are expected to read every day. Classrooms are stocked with books of diverse genres, contents, interests, topics and levels at children's disposal. From the rich and diverse exposure to books, children acquire and develop language, literacy and critical thinking skill. The joy in reading and strong independent thinking skill prepares children to be lifetime book lovers and learners. This is a typical literacy educational model in the U.S.

However, this is not the case with the conventional Chinese literacy education. In the conventional Chinese education, books other than textbooks are referred as "extra-curricular books", connoting a peripheral, thus dispensable, position. While supplementary materials, such as passages of readings from magazines or other basal texts may accompany the curriculum, textbooks monopolize and dictate the learning. Learning heavily, if not solely, relies on textbooks and students' grades are based on the memorization and reproduction of the texts. When adopting a literature-centered curriculum, obstacles surfaced. One teacher expressed that "We try to use the literature-centered approach to teach Chinese as we do in the English component, but we have very few Chinese books. Even with the few Chinese books we have, they are not of high quality and definitely not leveled properly as English books are", revealing the challenge in creating a hybrid program in the U.S. Although one may argue that since English is the dominant language in the U.S., books written in other languages may not be acquired easily. In fact, it is not the access to the resources that poses challenges – with the advent of Internet and online bookstores, the channels for material purchasing have become readily available.

Table 23.1 Chinese and English Literacy Materials by Grade Level

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
Number of English Books	1340	3430	2874	3993	4015
Number of Chinese Books	1401	892	790	902	782
Percentage of Number of Chinese Books to English Books	104 %	26 %	27 %	23 %	19 %

The challenge lies in the lack of quality and authentic Chinese literacy materials. The lack of Chinese materials increases the workload for the Chinese teachers as quoted by one teacher, "We have to create our own materials or translate them from the English books. This gives us so much more work to do outside of classroom."

The comparison of Chinese and English literacy materials by grade level is listed in Table 23.1.

From Table 23.1, for all the grades, with the exception of kindergarten, the number of Chinese books is far less than that of English books, reflecting a consistent trend of lacking of Chinese reading texts. In first grade, 3430 English books are available in the classroom while only 892 Chinese books are present. In second grade, there are 2874 English books at children's disposal, but only 790 Chinese books are offered to the children. Third grade and fourth grade follow the similar pattern in that there are 3993 English books in third grade and 4015 English books in fourth grade, compared to 902 Chinese books for third grade children and 782 Chinese books for the fourth graders. In terms of percentage, the percentage of number of Chinese Books to English Books for first, second and third grade is fairly consistent in the range of 23–27 %. Fourth grade has the lowest percentage of Chinese books compared to English books at 19 %. Judging from the number of Chinese and English books for kindergarten, a cursory assumption may be made that the Chinese literacy materials are abundant, surpassing its English counterpart. However, a closer examination revealed that the majority of Chinese books for kindergarten classroom concentrated on workbooks for drill purpose. The English books, by comparison, are of rich genre, content, and levels. Further conversation with the teachers confirmed the observation – "We do not have enough real Chinese books for the little ones," sighed one teacher.

The situation reflects the textbook centrism aspect of the Chinese education model. Textbook-centrism curriculum has long dominating the Chinese educational curriculum. While textbooks provide sequential learning through carefully orchestrated design, its "one-size-fits-all" design simply cannot meet every child's needs. The literature-based literacy curriculum, on the other hand, nurtures children with wide-ranging reading texts from where children are encouraged to learn at their own pace with their own interests and levels. The literary-based pedagogy in the Chinese/English DL program that follows the U.S. literature-based curriculum may just spawn a new possibility in Chinese education.

23.5 Conclusion

It is high time to witness the development of Chinese/English dual language program and the school presented in this paper is just one of the examples epitomizing the growth of dual language program and the significance of Chinese language education.

In the DL program, children of both Chinese heritage students and other ethnic groups develop both language skills in English and Chinese across subject areas. The interactions are peer-mediated, authentic, spontaneous and closely connected to children's experience in both languages. In the process of learning two languages, children support one another in the language needing of support. The separation of Chinese immigrant children from the mainstreamed students, hence, the isolation and labeling of these children, is replaced with the understanding and respect that everyone is a learner. Many families choose the Chinese/English DL program over other schools in their neighborhood zone despite the long commute. Parents in the participating DL program are of diverse ethnic, linguistic and cultural background. Although the majority of the parents are new Chinese immigrants, a considerable proportion of the family does not have prior experience with Chinese language or culture. Parents are dedicated to supporting their children's learning Chinese and constantly collaborate with teachers to form a strong partnership between school and family. Regardless of the divergence in their backgrounds, parents share the value of the DL program and believe in its potential in providing their children a solid education and a promising future. The ethnic diversity in the Chinese/English DL program provides rich interaction among students. Native speaker of English children facilitate the learning of English for the Chinese children; on the other hand, Chinese students also reinforces the acquisition of Chinese for their English-speaking peers, creating a supportive learning ecosystem where everyone thrives.

Despite the remarkable progress the DL program has achieved, challenges exist. The need for well-trained teachers with knowledge and experience in dual language model is urgent. For assessment and language policy, although the dual language program is the official choice among bilingual programs, the Chinese state assessment is still considered unofficial. Without the official status, the model's sustainability and credibility is seriously compromised. The situation exacerbates in the higher grades. At the participating school, the class size shrinks, as the children grow older. In fact, such a pattern continues into secondary education level. Families who are vested in the program may face the diminish or discontinuation of the dual language model when their children move beyond primary grades. For language development, continuing support and learning are keys to success. Therefore, for families aspiring to raise their children in dual language program, continuation of dual language program is critical in their decision making process. Finally, the lack of authentic Chinese children's literature poses paramount challenges to the development of dual language model. Since the literary-base curriculum is the norm in literacy education in the U.S., without developmentally-appropriate, authentic and engaging Chinese books, literature-based literacy learning and teaching can be very

difficult: Students cannot find authentic Chinese children literature appropriate to their level and interests to support, sustain and challenge their learning; teachers in dual language program usually spend countless hours serving as authors, translators, illustrators, editors and publishers to provide books for the children, further aggravating their already overwhelming work condition. The participating school is in urgent need of more authentic and diverse Chinese literature for children. Without publishers' commitment of producing Chinese literature for children, it would be arduous to devise the reading-based curriculum. While children do acquire foundational Chinese literacy skills under the traditional Chinese learning curriculum; the literature-based pedagogy in the U.S. invites another possibility in learning Chinese. For students entering the DL program without English background, the program provides support in their native language so that children can learn the content in Chinese while transfer the knowledge into English. By the same token, children without Chinese background also build their knowledge in English and then transfer to Chinese component. Children in the DL thrive with two languages and two cultures.

To sum up, the future of the dual language program is promising. However, the program requires conscientious collaboration from all the actors involved to flourish. The limitations of this study are inherent in a case study. A case study approach allows the in-depth investigation of the issue; yet, the results may not be applicable to other populations. Therefore, the issues uncovered in this case school may not represent those of other Chinese/English dual language schools. Factors such as the funding of the school, the history of the program and socioeconomic status of the students can influence the development of the program. In addition, the two languages in the case school are Chinese and English. The results from this study may not be applicable to other language pairs, such as Spanish/English, Arabic/English, French/English, or Korean/English dual language programs currently available in New York City.

Appendix 23.1: Interview Protocol for Participating Teachers

1. What is your teaching background?
2. What is your experience in the dual language program?
3. What is a typical workday like for you?
4. What is your workload like?
5. What is the curriculum like for your grade?
6. How are the State tests on ELA (English Language Arts), Math and Chinese impacting your teaching and students' learning?
7. What kind of PD (Professional Development for teachers) from school or district do you receive for developing Chinese component curriculum for your grade?
8. What challenges do you find in terms of Chinese literacy material?
9. How is the parent support and participation?
10. What are your views on the growth and challenges for the Chinese/English dual language programs?

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Part IV
Conclusion

Chapter 24
Chinese Education Models in a Global Age: Myth or Reality?

Jonathan Spangler

Abstract The extent to which a distinct Chinese education model can be identified is the subject of much debate. Among the many studies that approach the question, there is a tendency to be selective in elaborating the constituent elements of what could be viewed as a Chinese education model. Moreover, conceptualizations of Chinese education risk implying homogeneity in what can be more accurately understood as the overlapping of heterogeneous notions and practices in different educational contexts. By synthesizing evidence presented in this book and the research that has preceded it, this chapter aims to delineate the main aspects of what has been referred to as a Chinese education model. The chapter first argues that the Chinese education model is characterized by three attributes: dynamism, hybridity, and heterogeneity. It then makes the case that the Chinese education model can be more clearly understood by conceptually disaggregating it into its three key elements: norms, institutions, and individuals.

24.1 Introduction

As the preceding chapters in this book demonstrate, there is no clear-cut, straightforward way of conceptualizing a Chinese education model. Today, even the term 'Chinese' itself, in the broader socio-cultural sense, spans many historical eras, geographical locations, and peoples. The diversity of "Chineseness" in a global age complicates any attempt to distill the notion of a Chinese education model into the bite-sized definition that academics and policymakers so often desire. Nevertheless, the contributions that make up this volume represent an attempt to shed light on the issue. Instead of suggesting that chapters subscribe to a certain conceptualization of Chinese education, the book has encouraged authors to approach the issue from different angles and express a wide range of relevant viewpoints.

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Although no chapter or book could adequately summarize Chinese education models in their entirety, this concluding chapter attempts to identify some of the key aspects and themes that contributing authors have touched upon in this book and in the research that preceded it. It argues that a conceptualization of Chinese education models inclusive of three attributes—dynamism, hybridity, and heterogeneity—and three elements—institutions, norms, and individuals—offers a framework for more clearly understanding the issue. While it would be impractical for any individual study to take all of these into account, future research on Chinese education models would do well to be aware of its place within this framework as well as within the greater body of relevant literature.

24.2 Attributes

Chinese education models are characterized by three major attributes: dynamism, hybridity, and heterogeneity. By no means a collection of unchanging theories and practices, Chinese education models are *dynamic*, evolving over time and highly influenced by the prevailing political, economic, and cultural forces of an era. Moreover, Chinese education models today can be most accurately understood as *hybrid* models shaped by the continuous exchange of ideas and people across borders and between cultures. Finally, because Chinese influence extends far beyond the geographic borders of mainland China and education systems themselves are composed of many different parts, Chinese education models are *heterogeneous*, differing by geographic region, discipline, level, and institution. These three attributes are highlighted in the sections that follow.

24.2.1 Dynamism

The history of Chinese education spans several millennia, representing a longevity and richness matched by few other cultures in the world. As contextual factors in China have changed, dynamism has been a key attribute of the education models as they have undergone a constant process of evolution and adaptation. Moreover, these contextual factors have been both internal and external in nature, each with their own corresponding impacts. The basic idea of an education model in China has far outlived any individual political regime or historical era. Although a comprehensive review of the history of Chinese education is far beyond the scope of this chapter, suffice it to say that, as human geography has shifted and dynasties and kingdoms have risen and fallen over the years, major aspects of the education models have changed accordingly.

It is a common undertaking for researchers to identify key events and periods in the history of Chinese education. While it can be reasonably assumed that the most basic notion of education in China predates recorded histories, the origins of the education system have been traced as far back as the sixteenth century BCE (Guo-Brennan 2016). Confucian philosophy, which has come to describe concepts now

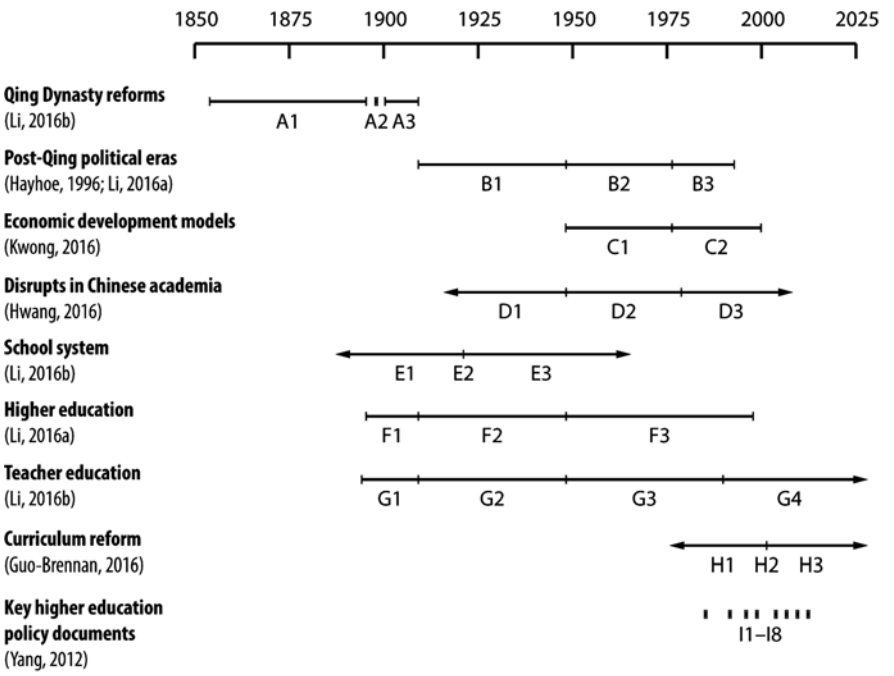
recognizable in popular culture around the world, is one of the most frequently cited contributors to the theory and practice of education in Chinese societies today. With Confucian thought emerging in the sixth century BCE during the Spring and Autumn period, long has it played an influential role in the development of educational traditions. The Chinese writing system has also been an important factor in shaping Chinese societies. Their influence not only is apparent in mainland China itself but also extends into the many other cultures shaped by Confucian philosophy and Chinese writing, including those of northeast and southeast Asia and the Chinese diaspora's settlements in cities and regions around the world.

Depending on the perspective taken, there are several ways in which researchers have described the dynamism of the education model in China over the past several 100 years. As the Qing Dynasty rulers struggled in the mid- to late-nineteenth century with the damaging impacts of colonial intervention, the heavily Confucian-influenced education model became increasingly inadequate and educational reforms became inevitable. In the last 50 years of its existence, political and economic reforms led to a radical restructuring that impacted institutions of all types, education inclusive (Li 2016b). Since the dynasty's collapse in 1911, the Chinese political landscape has undergone a series of dramatic changes, and the education model has evolved dynamically as a direct result (Chou 2016a; Deng 2016). Figure 24.1 summarizes several ways in which the preceding chapters in this book have conceptualized the development stages of the Chinese education model since the mid-nineteenth century.

The timelines of education model development in mainland China described in the book and visualized in Fig. 24.1 reveal the dynamic nature of the Chinese education model. Although each author represents a different perspective on the issue, there is broad agreement that dynamism is a key attribute. Throughout history, the education model has undergone constant changes resulting from sociopolitical, economic, and other forces. Furthermore, the timelines also show the inherent hybridity and heterogeneity of the Chinese education model as discussed in the following sections.

24.2.2 Hybridity

Tightly intertwined with their historical dynamism described above, Chinese education models are also hybrids influenced by the education systems and political establishments of other countries. Education models worldwide have borrowed from existing systems, philosophies, and institutional structures, so the notion of a pure model unaffected by external or historical forces is but a fantasy in all but the most isolated geographic and cultural contexts. As Li notes, even educational institutes from over a millennium ago were modeled off of other institutes, as with the mostly autonomous academies (*shuyuan*) of the Tang Dynasty in the eighth century, which were developed along the lines of Buddhist and Taoist temples (Li 2016b). Tan and Reyes' expand on this in their analysis of education policy borrowing,



A1. Self-Strengthening Movement (1861–1895)
A2. Hundred Days' Reform (1898)
A3. New Reform (1901–1911)

B1. Nationalist Period (1911-1949)
B2. Socialist Period (1949-1978)
B3. Reform Period (1978-1990)

C1. Marxist model (1949–1976)
C2. Rostow model (1976–2000)

D1. U.S./European influence (–1949)
D2. Soviet influence (1949–1979)
D3. Total westerniation (1979–)

E1. Japanese model (–1922)
E2. *Renxu xuezhi* legislation (1922)
E3. American model (1922–)

F1. Establishment (1895-1911)
F2. Experimentation (1911-1949)
F3. Institutionalization (1949-1998)

G1. Establishment (1897–1911)
G2. Institutionalization (1912–1949)
G3. Re-Institutionalization (1949–1993)
G4. Professionalization (1993–Present)

H1. Pre-reform (–2001)
H2. Basic Education Curriculum Reform Outline / New Curriculum Reform (2001)
H3. Post-reform (2001–)

I1. Decision on the Reform of China's Educational Structure (1985)
I2. Outline of China's Education Reform and Development (1993)
I3. Ninth 5-Year Plan for the Nationwide Education Cause and Development Programs for the Year of 2010 (1996)
I4. Program of Educational Revitalization for the Twenty-first Century (1998)
I5. Tenth 5-Year Plan for the Nationwide Educational Cause (2002)
I6. 2003-2007 Action Plan for Invigorating Education (2004)
I7. Outline of the Eleventh 5-Year Plan for the Development of Nationwide Education Cause (2007)
I8. Outline of State Plans for Medium and Long-term Reform and Development of Education (2010)

Fig. 24.1 Timeline of education model development stages in mainland China since the mid-1800s

arguing "that a hybrid model of education exists in China that combines foreign and local ideas and practices. Rather than wholesale policy borrowing from the West, the foreign ideas and practices are being internalised and indigenised in China as they interact with local traditions, values, ways of doing and actors" (Tan and Reyes 2016).

The process of borrowing both from preexisting local models and contemporary foreign models has long been ongoing. Over the past two centuries, European,

Japanese, Soviet, and North American education systems have all influenced Chinese education models at different times. Indeed, even the term *jiaoyu* for education was imported towards the end of the nineteenth century from the Japanese language (Li 2016b). Likewise, important figures outside of mainland China have taken note of key aspects of Chinese education. The *keju*, or imperial examination, and the integration of imperial bureaucracy and higher education institutions, for example, were objects of admiration for European philosophers and Jesuit missionaries (Li 2016a).

At the end of the nineteenth century, aspects of the Japanese education model, which was itself based in part on the French education model, were introduced into China. From the collapse of the Qing Dynasty until the end of the Republican period, key aspects of the American education model were adopted in China, as were some features of European education models (Hwang 2016a; Li 2016b). Among Chinese intellectuals of the time, ideological inspiration came in large part from the ideologies of social Darwinism, scientism, and anti-traditionalism (Hwang 2016a). Following the Chinese civil war, Soviet influence drove many of the education system reforms in communist China. This lasted for several decades until the Reform and Opening Up of the 1980s, when aspects of the American model again began to make their way into the Chinese education system. While some research has shown that educators of Chinese descent today view a hybrid of Chinese and American models as ideal (Beckett and Zhao 2016; Ho and Wang 2016), others have suggested that the result of conflicting models can lead to reality shock, struggle, or resistance for teachers and students (Guo-Brennan 2016; Hsu 2016; Wang 2016a).

Today, several aspects of the Chinese education model provide evidence of its hybridity. These include the shifts towards decentralization, the autonomy of educational institutions, constructivist pedagogy, formative and alternative assessment, active participation and student-centered learning, emphasis on lifelong learning, innovation, and experimentation and knowledge by doing (Beckett and Zhao 2016; Tan and Reyes 2016). Although some have suggested that the realization of systemic weaknesses has led to policy borrowing and the creation of a hybrid education model in China, it has also been attributed to the existence of a pragmatic ethos and accommodative nature in China throughout its recent history (Li 2016b; Tan and Reyes 2016). In other countries, Chinese education has been hybridized with local education models, as has occurred in Australia, New Zealand, the Philippines, Taiwan, the U.S., and so on (Da and Welch 2016; Ho and Wang 2016; Hsu 2016; Kotah 2016; Spangler 2016). Whatever the impetus for policy borrowing has been, the evidence from history and today reveals that, along with dynamism and heterogeneity, hybridity is one of the key attributes of the Chinese education model.

24.2.3 Heterogeneity

Because Chinese education models exist in many different contexts, it follows that they differ in significant ways depending on contextual factors. Heterogeneity is thus the third inherent attribute of what could be termed Chinese education models. Broadly interpreted, contextual factors contributing to their heterogeneity include geographic region, discipline, and institution type.

24.2.3.1 Geographic Region

Education models influenced by Chinese history, culture, and philosophies are present in many different geographic regions, both within mainland China and around the world. As a result, there are significant differences between what could all be generally classified as Chinese education models. In China, geographic region has affected the education model throughout history. For example, remote areas of the country have long been host to education models distinct from those of major population centers. Such was the case in the past when educational institutions in developed areas were linked to the imperial bureaucracy while rural schools were more autonomously run (Li 2016a). Today, a similar divide can be seen between cities such as Shanghai, where schools churn out some of the world's highest achievers on international standardized tests (e.g., PISA), and rural Western China, where "education resources are limited, school facilities and infrastructure are dilapidated and unsafe, teachers have little access to professional training and development, and poverty and illiteracy rates are the highest in the country" (Guo-Brennan 2016). The stark contrast between geographic regions, even domestically, makes it clear that presuming that there is one Chinese education model applicable throughout the country would be far from accurate.

The geographic heterogeneity of Chinese education models is perhaps even more apparent in the ethnic Chinese enclaves that exist in many countries globally. From Chinatowns to individual family units of Chinese descent living around the world, aspects of Chinese education models manifest themselves in people's everyday lives. While common practices and ways of thinking among these populations do exist, their diversity is greater than any single similarity between them. In their analysis of parenting practices of Chinese immigrants in Australia, Da & Welch comment, "the long history and great size and diversity of the Chinese diaspora, in many different contexts, means that the Chinese should no longer be considered a homogeneous group: a proper account needs to be taken of their diverse social and economic status, countries and regions of origin, religion and languages they speak" (Da and Welch 2016). Nevertheless, although not universal, some common features have been identified, including high educational expectations of children, high-stakes testing as academic achievement, emphasis on supplementary education, and credentialism (Chou 2016b). Indeed, it has even been found that the belief in the link between education and upward social mobility has been an important motivator

for some Chinese parents in deciding to immigrate (Ho and Wang 2016). Other potential commonalities, such as perspectives on physical punishment, have been questioned or refuted by recent research (Da and Welch 2016).

24.2.3.2 Discipline

Apart from their geographic heterogeneity, Chinese education models also differ by discipline. Within the context of Chinese-influenced education, each discipline, be it mathematics, languages, or citizenship education, has differences that shape and are shaped by the broader education model. As a result, understanding these as distinct models that share certain characteristics may often be the more precise way of conceptualizing them.

Pedagogical practices in mathematics, for example, that are distinctive aspects of a Chinese mathematics education model, such as an operational mathematics curriculum and solution-oriented problem-solving strategies that encourage high performance coupled with risk aversion, do not necessarily translate to other disciplines (Chiu 2016). Other aspects, such as the East–West dichotomies in mathematics education identified by Leung (2001), including "product versus process; rote versus meaningful learning; studying hard versus pleasurable learning; extrinsic versus intrinsic motivations; whole class teaching versus individualized learning, and competence of teachers," may be representative of cross-discipline commonalities (Wang 2016b; citing Leung 2001). Similarly, while the Chinese language education model historically emphasized literacy over oral competency, such findings for a given field could not necessarily be applied more broadly (Sung and Poole 2016). Despite the variation across disciplines, it is nevertheless evident that commonalities do exist. Such commonalities are the impetus for many of the studies attempting to refine our understanding of education models in contexts influenced by Chinese history, culture, and philosophies.

24.2.3.3 Institution Type and Level

The heterogeneity of Chinese education in the broad sense of the term is also evident when comparing institution types and levels. Wide variation among schools falling under the Chinese education model umbrella can be observed in many different instances, particularly given the diverse objectives of different types of educational institution. Commonalities between the curricula of mainstream and vocational schools, for example, may be limited, as they seek to achieve different outcomes for their student populations. Moreover, the educational theories and practices of supplementary educational institutions, such as evening and weekend preparatory and cram schools, differ to varying extents from their formal institutional counterparts. Countries have also implemented alternative or supplementary education models in order to provide disadvantaged students with modified opportunities for educational advancement. Students from minority populations, those

coming from lower socioeconomic backgrounds, and students with disabilities or other special needs may simultaneously be a part of both the education models of the mainstream school system as well as education models or systems modified to address their specific circumstances. In the case of Taiwan, where the education model already offers clear evidence of hybridity and heterogeneity, the education model designed for disadvantaged students is both different from that of the mainstream model and reflects the influences of policies implemented elsewhere (Cheng and Jacob 2016). Needless to say, the education models of different levels of institutions, from preschool to higher education, likely have at least as much that distinguishes their respective models from one another as they have in common.

Studies that raise doubts about the existence of a Chinese education model often emphasize its hybridity. Although it is apparent that there is no purely Chinese education model fully isolated from external and historical forces, suggestions that none exists whatsoever neglect that three key attributes define it. Chinese education models are characterized by dynamism, hybridity, and heterogeneity, and these attributes continue to shape them to this day. Understanding these attributes is crucial to delivering well developed analyses of Chinese education models, and it is our hope that, taken together, the chapters in this book can offer a foundation for future research on the subject.

24.3 Elements

In addition to the three key attributes that characterize Chinese education models, it is also useful to disaggregate the models into their constituent elements. One possible conceptualization, as is suggested in this concluding chapter, is a disaggregation into three elements: norms, institutions, and individuals. Each of these elements has a reciprocal but unequal effect on the other two, as indicated in Fig. 24.2.

24.3.1 Norms

Norms are the glue that binds together individuals and institutions and their respective theories and practices within a society. To a large extent, research about Chinese education models is founded on observations of the institutions and individuals upon which relevant norms have had a significant impact. This section looks at a select few of the main objects of education-related norms—society, teaching and parenting, and learning—that evidence in this book and elsewhere suggests play an important role in shaping Chinese education models.

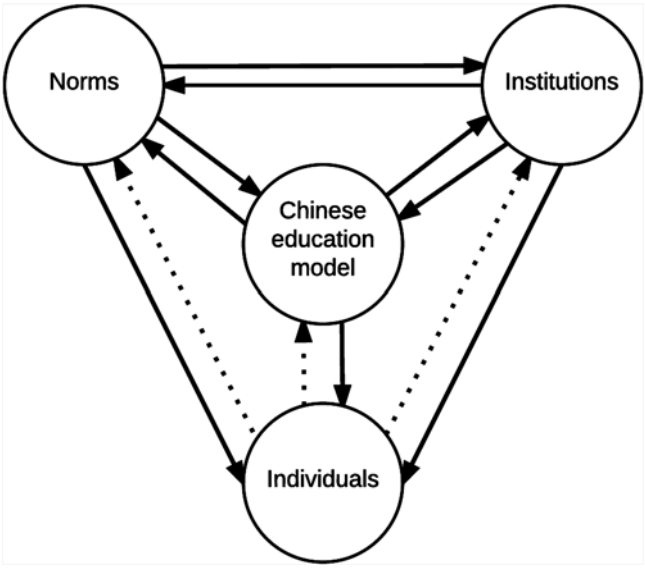


Fig. 24.2 Elements of Chinese education models (Note: *Arrows* indicate the direction of effects. *Solid lines* indicate major effects whereas *dotted lines* indicate those that are less prominent. Although individuals have an effect on the institutions and norms that also comprise the education models, the converse effect—that is, the effect of institutions and norms on individuals—is greater)

24.3.1.1 Society

Certain norms applicable to society at large have an important impact on the models of education in that society. In contexts influenced by Chinese history, culture, and philosophies, these include a high regard for education, particularly in terms of its role in social mobility as well as individual and national development; meritocracy; collectivism and family and social cohesion; filial piety and deference to authority; and high societal and extended family expectations.

Throughout history, education has been a valued institution in Chinese societies. As Li writes, the "belief in the importance of learning, teaching and schooling has been deeply imbedded in Chinese culture over the past 2000 years" (Li 2016b). At the heart of Confucian philosophy is an emphasis on education. Such is its centrality that the first word of *Analects* is "learn" (*xue*). The collection begins, "The Master said, 'To learn and then have occasion to practice what you have learned—is this not satisfying?'" (Confucius, in Slingerland 2006, p. 1). Over the two millennia since its writing, the high regard for education has continued to be a norm in Chinese societies, surviving the rise and fall of dozens of political establishments within China. Moreover, it has become a global force, expanding into neighboring cultures influenced by that of China as well as spreading globally in parallel with the Chinese diaspora.

Moreover, since at least the advent of the civil examination system in the fourth century, there has been a close link between the normative importance of education and the belief in its role as the key to upward social mobility (Wang 2016a; citing Biggs and Watkins 2001; Siu 2004). Today, this belief continues (Ho and Wang 2016). Emphasis on education has also been seen as the path to individual and national development (Li 2016a). Evidence of such models of development can be found in many instances in China's history as well as in other countries influenced by the Chinese.

The high regard for education and the Confucian tradition have also been an impetus for and mutually reinforced by other norms, including meritocracy; collectivism and family and social cohesion; and high societal and extended family expectations. Views that education is the route to success at the individual, family, and national level are cause for exceptionally high expectations of learners. Indeed, it is not uncommon for parents or teachers to discourage or prohibit any activity seen as a distraction from students' educations (Da and Welch 2016). These norms about the structure of society, combined with the Confucian-inspired norms of filial piety and deference to authority, create an environment for education that is indicative of what may be loosely considered a Chinese education model.

24.3.1.2 Teaching and Parenting

Norms regarding teachers and teaching as well as parents and parenting are also a key element of Chinese education models. In Chinese and Chinese-influenced societies, the ideal teacher is embodied by several key characteristics. First, they are an authority figure. Within the classroom, teachers are expected to maintain an orderly and disciplined learning environment, and in doing so, they are the sole decision makers (Tan and Reyes 2016; Wang 2016a). In recent years, education reforms in China, Taiwan, and elsewhere have pushed for what has been termed a more student-centered curriculum. However, these efforts differ significantly from the notion of student-centered learning in other geographic contexts, such as the U.S. Emphasis is placed on increasing students' active participation and cooperation in the classroom, but these "student-centred approaches exist within a teacher-dominated environment where the teacher still retains the respect, control and decision-making" (Tan and Reyes 2016).

Second, the ideal teacher is an exceptionally competent bearer of knowledge. Traditionally viewed as respected scholars, they must take their deep knowledge of their subjects and impart it unto students, who must strive to learn this content in its entirety. The knowledge-orientation of Chinese educators ties into the textbook-orientation of the corresponding curricula. Curricula tend to be highly structured and content-rich. Both teachers and teaching materials serve the purpose of transferring large quantities of static knowledge to students, and those students most capable of retaining and reproducing this knowledge are the ones with the highest levels of academic achievement.

Third, the ideal teacher is a model citizen. They embody the virtues that students are expected to uptake, including a dedicated work ethic and willingness to make the effort to succeed at all costs. In many ways, the ideal teacher–student relationship closely parallels that of the ideal parent–child relationship. Parents are tasked with getting their children to excel academically and will use their authority and go to great lengths to ensure that it happens. Children bear the burden of putting in the effort to meet or exceed the expectations of parents, extended family, teachers, and society.

24.3.1.3 Learning

Celebrated for millennia, devotion to learning has long been a key aspect of Chinese-influenced societies. Norms about learning and learners permeate the lives of all individuals and shape models of Chinese education. The high value placed on learning contributes to the deeply ingrained nature of related norms. All interwoven with one another, these include an emphasis on hard work, persistence, and effort over abilities; focus on memorization, repetition, and drilling for knowledge acquisition; high levels of resource investment and sacrifice; parental engagement and supervision; supplementary education; and risk-aversion.

The importance placed on effort and persistence forms the normative foundation of many Chinese education models. Learning involves a commitment to investing whatever time and effort it takes to master the knowledge or skills at hand. With enough effort, anyone can learn and achieve their academic aspirations. This contrasts with models of education in continental Europe and the U.S., where a great deal of emphasis is placed on identifying each individual student's specific abilities and encouraging them to excel in that domain. With knowledge acquisition as the goal and effort and persistence as the pathway to achieving it, tactics for learning stress memorization, repetition, and drilling (Sung and Poole 2016). Exam-orientation also lends itself to this, as is discussed further in the following section.

In order to maximize the opportunities for learners' to put in the effort, parents in the context of Chinese education models demonstrate high levels of resource investment in their children's education in terms of both finances and time. Families in Confucian societies lead globally in terms of their levels of financial expenditure on education. The vast numbers of students attending various forms of supplementary education in private evening and weekend institutes is but a part of this. Indeed, many parents go to even greater lengths to provide optimal educational opportunities for their children, some opting to emigrate for that sole purpose. Moreover, immigrant families have also been known to go one step further. In Australia, for example, "[s]electing the best educational institutions for children is a prevalent phenomenon among Chinese parents … some make considerable sacrifices to buy houses near desirable schools, for example, and also enrol their children into private coaching colleges" (Da and Welch 2016). Two implications of the norms discussed above are that Chinese-influenced societies have indeed managed to produce some of the world's highest achieving students as determined by international standardized

assessments but such accomplishments are often the result of extrinsic motivating factors (Spangler 2016; Zhou and Wang 2016).

24.3.2 Institutions

The structure of education is shaped by the institutions that it is composed of, and institutions influenced by Chinese education models exist in different contexts and have different objectives. The effects of this diversity combine with those of the education models themselves to produce many different types of educational institutions. These include public and private, comprehensive and specialized, and offline and online at all levels from primary to continuing education. Yet educational institutions themselves comprise only a portion of the institutions that influence education systems. Others in the public and private sectors, including government agencies, enterprises, and nonprofit organizations, both shape and are shaped by the education models in their respective contexts. Evidence from the chapters in this book suggests that there are some commonalities between these institutions and within these education systems. Among these, centralization, standardization, emphasis on examinations, teacher-centrism, and credentialism feature prominently, though it must be understood that not one of these characteristics is universally applicable across these institutions.

24.3.2.1 Governmental

Government agencies and policymakers have a key role to play in nearly all education systems. Legislation often decides the structure of educational institutions and designs the systems used within them. Thus, what governments devise becomes a reality within educational institutions and affects the individuals involved in them. In many cases, the institutional structure of government is reflected in that of educational institutions and vice versa. Throughout Chinese history, an emphasis on centralization and meritocracy through standardization and high-stakes testing has been designed into bureaucracies as well as the institutions within their sphere of influence (Guo-Brennan 2016; Wang 2016a; Chou 2016b). In terms of centralized authority at the national level, the Ministries of Education in societies influenced by Chinese history, culture, and philosophies tend to be the key decision makers regarding domestic educational institutions. Yet another commonality among government institutions that is reflective of the Chinese-influenced context as well as local educational institutions is the examination-centric process of entering civil service. Backed by a meritocratic rationale historically, standardized civil service examinations, such as the National Civil Service Exam (*Guojia Gongwuyuan Kaoshi*) in China, the Civil Service Exam (*Gongwu Renyuan Kaoshi*) in Taiwan, and the Common Recruitment Examination in Hong Kong, are common features at the national level in countries with populations of predominantly Chinese descent and

are indicative of the common models employed by government and educational institutions.

24.3.2.2 Business

The structure and practices of private enterprises operating in contexts influenced by Chinese history, culture, and philosophies also share certain parallels with and links to their local education models. Credentialism is among the most immediately apparent. Businesses both reinforce and are shaped by the norm of credentialism prevalent in many societies affected by Chinese education models (Chou 2016b). Centralization is yet another common feature of private enterprises in such contexts, with higher-ranking authorities serving as the sole or primary decision makers.

24.3.2.3 Educational

Needless to say, educational institutions themselves, diverse as they may be, are the primary institutional elements of education models. Evidence suggests that certain features are common, but by no means universal, among those institutions operating in broader Chinese contexts. Some of those discussed throughout this text include centralization, teacher-centrism, rigid evaluation systems, textbook-centrism, and supplementary education.

As with relevant government agencies and enterprises, centralized structures are common at the institutional level, with top-level administrators being the central decision makers in their respective roles. As a rising tide of scholarship has noted, educators in their teaching roles often find themselves with limited voice within their institutions and subject to the whims of administrative decisions (Chou 2014; Hwang 2016a). Yet within the classroom, the authority to make decisions is largely carried by teachers themselves (Sung and Poole 2016). Indeed, teacher-centric classroom environments are no new phenomenon in the greater Chinese context.

Also a feature of many such educational institutions is the integration of rigid and standardized evaluation systems. This takes many different forms. For students, it is manifested in an emphasis on examination as the dominant form of assessing student achievement and also serves as the go-to method of determining which individuals are qualified for admission to an institution vis-à-vis entrance exams. A direct corollary to the evaluation-orientation built in to educational institutions is textbook-centrism, with textbooks containing precisely the knowledge required by students to excel at specific standardized tests (Guo-Brennan 2016). For professors, the emphasis on rigid and standardized evaluation systems is manifested in the powerful influence of institutions using bibliometric citation indices, such as the Social Sciences Citation Index (SSCI), as the primary component of assessments regarding promotion and tenure. Pressure to publish in outlets with greater global reach is a double-edged sword. On one hand, it may benefit institutions in their efforts to rank higher globally. On the other hand, it can have detrimental impacts on educators by

drawing them away from locally relevant issues and their roles as teachers (Chou 2014; Hwang 2016a). Although educational reforms, such as the curriculum reform pushing for "quality-oriented education" launched in Shanghai in 2001, have attempted to shift curriculum away from its traditionally exam-centric approach, the emphasis remains deeply rooted in the structure of many educational institutions at all levels (Tan and Reyes 2016).

In order for students to remain competitive in preparation for assessment, an entire industry of supplementary education has arisen in many Chinese contexts. The longevity and scale of supplementary education in societies influenced by Chinese history, culture, and philosophies far surpass that of other regions in the world. As Bray (2009) writes in a UNESCO report, "In East Asian societies such as Japan, Hong Kong, Korea, and Taiwan, tutoring has long been a vigorous activity and is deeply embedded in the culture. Part of the explanation for this lies in Confucian traditions which value education and which stress diligence" (Bray 2009, p. 24). The emphasis on supplementary education has also followed the Chinese diaspora around the world, with evening and weekend schooling of different varieties being common among families of Chinese descent (Ho and Wang 2016; Hsu 2016).

24.3.3 Individuals

At the heart of institutions that make up the overall structure of Chinese education in its many contexts are individuals. Although individuals play many diverse roles within these institutions, this section focuses on those of teachers and students.

24.3.3.1 Teachers

The behavior and actions of individuals, including teachers and students, are so highly influenced by their normative and institutional contexts that they are largely a reflection of them. Educators, highly respected in Chinese-influenced societies, follow established social and cultural norms in the process of formulating their own educational theories and practices. Many teachers operating within the diverse contexts of Chinese education integrate such practices into their teaching routines. These include an emphasis on effort and perseverance; a disciplined learning environment with themselves as authority figures; high expectations of students; meritocratic pedagogy; instilling values that schooling is the pathway to success; and so on (Stevenson and Stigler 1992; Da and Welch 2016; Ho and Wang 2016; Zhou and Wang 2016). Other aspects of their teaching practices are a reflection of their institutional environments and commitments, such as knowledge-, textbook-, and examination-centric pedagogy and a focus on memorization, repetition, and drilling as primary forms of knowledge acquisition and retention. Undoubtedly, few individual educators in Chinese contexts adopt all of these aspects of Chinese education

models, but evidence from the chapters in this book and previous research suggests that there is a tendency for these practices to manifest themselves in such contexts. Teachers are as diverse as their normative and institutional environments, and it is therefore no surprise that not all practitioners reflect the models of education under which they operate and, in some cases, have even taken to resistance of such influences (Guo-Brennan 2016; Hwang 2016b).

24.3.3.2 Students

As with teachers, normative and institutional influences in many ways shape the ideas and practices of students. In Chinese contexts, broadly interpreted, students have demonstrated a tendency towards high levels of academic achievement, the respect for learning and discipline that contribute to it, and many of the learning strategies encouraged by their teachers and families (Chiu 2016; Da and Welch 2016). On the other hand, evidence also suggests that some students have a reverence for Western education models while maintaining the theories and practices that they have internalized over the years (Tsai 2016). Needless to say, the dynamism, hybridity, and heterogeneity discussed in the first half of this chapter applies as much to individuals (including students), institutions, and norms as it does to Chinese education models taken as a whole.

24.4 Conclusion

Based on evidence from both within this book and relevant past research, this concluding chapter has argued that conceptualizations of Chinese education models would do well to take into account its key attributes: dynamism, hybridity, and heterogeneity. In other words, models of education that have been influenced by Chinese history, culture, and philosophies are *dynamic* in that they change over time based on many factors, including sociopolitical shifts, economic trends, and other systemic developments. Figure 24.1 clearly illustrates this dynamic evolution. In many cases, Chinese education models are also *hybrid* models derived not only from Chinese education systems historically but from the systems and beliefs of other countries as well. This is evident both within China and in other Chinese-influenced societies. Within China, Soviet, Japanese, French, American, and other education models have made major contributions to the direction of domestic educational development over the years. Outside of China, its education models have merged with those of other countries. Many of these, including Australia, Canada, Hong Kong, Macau, New Zealand, Singapore, and the United States, have been discussed in the preceding chapters, revealing that hybridization has occurred in both directions, with Chinese education models both influencing and being influenced by other models. It thus follows that, in addition to being dynamic and hybrid, such models are *heterogeneous*, differing greatly while simultaneously maintaining

certain characteristics, as detailed above, from one context to the next. Geographic location, discipline, and institution type and level are among the most salient contextual factors contributing to this heterogeneity.

The second half of the chapter has suggested that disaggregation of the concept of Chinese education models into three of its elements—norms, institutions, and individuals—can offer a broad framework for related research. The *normative* elements explored relate to society, parenting, teaching, and learning. As for the *institutional* components of Chinese education models, government agencies, businesses, and educational institutions themselves all play influential roles in shaping—and being shaped by—them. Lastly, the *individual* constituents of Chinese education models, including teachers and students, have an important place in the education models in which they are a part, most notably in that they are conveyors of relevant norms, beliefs, behaviors, and practices. Although no academic work could adequately offer a comprehensive account of all that embodies Chinese education models, it is hoped that the diverse contributions of the 23 preceding chapters and the synthesis and broad framework presented in this concluding chapter provide a useful foundation for future research on the topic.

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