Journal of Contemporary China (2006), **15**(47), May, 233–254

Routledge
Taylor & Francis Group

The Cultural Politics of Curricular Reform in China: a case study of geographical education in Shanghai

ANDREW M. MARTON*

This article will examine the development and implementation of the new geography curriculum in secondary schools in Shanghai. Analysis of the processes and mechanisms which underlie curricular change in China reveals how embedded bureaucratic, social and cultural norms have profoundly influenced the degree to which reforms to the geography curriculum have achieved the desired results. The analysis begins with a detailed examination of the wider institutional hierarchies which initiated and managed curricular reforms in Shanghai. Interviews with teachers and extensive classroom observations, and a review of the new curriculum and geography textbooks are utilised to evaluate the practical outcomes of curricular change in Shanghai. The findings reveal a deep dichotomy between the intended goals of curricular reform, the processes of curriculum development and implementation, and an examination system which compels teachers to cling to traditional teaching methods of lecturing and rote learning. These findings are discussed in the context of the established educational hierarchies, the cultural politics of curricular reforms in Shanghai and the nature of geography teaching in China. A more balanced approach which addresses the provision of adequate resources and professional development for teachers, and which recognises the need for a fundamental restructuring of the examination system, is suggested.

Introduction

This article will review and analyse the most recent curricular reforms in China with a particular focus on the geography curriculum in Shanghai. The issues which arise in the process of reform deserve attention because they have deeply affected the outcomes of curricular change and continue to have an important influence on teaching practice in Chinese schools. As with other sectors in China, the real impact of national or even regional-level reforms cannot be fully understood without examining the character of local-level small scale practice. No part of China's educational system has undergone more extensive change since China began

* Andrew Marton is a Reader in Chinese Geography and Director of the Institute of Contemporary Chinese Studies at the University of Nottingham, UK. His research interests include urban and regional development and geographical education in China. He wishes to thank two anonymous reviewers for helpful comments on an earlier draft of the paper.

ISSN 1067-0564 print/1469-9400 online/06/470233–22 © 2006 Taylor & Francis
DOI: 10.1080/10670560500534855

economic reforms in 1978 than middle (or secondary) schooling. The direct connection between secondary school performance and career opportunities that existed before the Cultural Revolution was re-established through the re-introduction of university entrance and graduation examinations. From 1978, candidates for university and college were selected mainly on the basis of their academic performance rather than their class status, family background, or their political performance. Moreover, there has been some experimentation with new ways of conducting examinations, particularly for university entrance. In 1985, for example, Shanghai Municipality was the first region in China given the freedom to conduct its own university entrance examinations. In 1986, Shanghai Municipality and adjacent Zhejiang Province began testing new systems of exams whereby students first wrote provincial level senior secondary school leaving examinations (*huikao*). The results of these graduation examinations formed part of the criteria for selecting candidates to enter universities. As this new entrance procedure became more widely known, a similar system was put into place throughout most of China by 1994.

In 1986, the Chinese government promulgated a law calling for the popularisation of nine year compulsory education. The state required that all children complete a basic education up to the end of junior secondary school (Grade 9) or equivalent. However, the practical implementation of such a policy came up against numerous social, administrative, and financial obstacles. China still spends less than 3% of its GNP on education. This should be compared with the median of 4–5% in other developing countries and 6% or much higher in developed countries.[1] The proportion China spends now on education has not changed significantly since the early 1980s.[2] Although education in China has always been perceived as a base for social and political change, and as a tool for economic development, secondary education was not geared to serve the majority of students. For years, secondary schools functioned largely for the benefit of students who would go on to university, a mere 3–4% of the total in the early 1990s.[3] This was reflected in the nature of nationally determined curriculum materials (primarily the prescribed textbooks) and the university entrance examination system. Secondary school textbooks were generally characterised as overly content oriented, very detailed and uninspiring. Meanwhile, national level examinations were used as the primary means of evaluating candidates who wished to go on to university.

While progress towards the universalisation of nine year compulsory education has been fairly steady, Chinese educators soon realised that the national unified curriculum materials, especially the textbooks, had become an obstacle to raising educational quality. In more developed regions such as east coastal Shanghai, Zhejiang Province, and Jiangsu Province the textbooks were considered too simple, while schools in remote areas felt they had difficulty in teaching the text. In response to this problem, the then State Education Commission (SEC) in 1986 initiated the sixth secondary school curriculum reform since 1949. Historically speaking, curriculum

1. X. F. Wang, *Education in China since 1976* (North Carolina and London: McFarland, 2003), p. 15.
2. World Bank, 'Issues and prospects in education', in *China: Long Term Issues and Options* (Annex to the World Bank Report) (Washington, DC: World Bank, 1985).
3. B. C. He, *China on the Edge: The Crisis of Ecology and Development* (San Francisco: China Books & Periodicals, 1991).

and teaching materials have always been determined and published through the central educational authorities in China. Similar to the decentralisation of administrative and economic decision making to the local level in other sectors, the SEC decided to decentralise the existing unified curriculum and teaching materials by 'calling for tenders' (*zhaobiao*) for the preparation of new materials. Local publishers and education bureaux were encouraged to develop and propose their own plans for the new curriculum materials that were to be used in local or regional schools. Based on the results of these proposals, the SEC would make a final determination as to how many kinds of curricula and teaching materials corresponding to varying conditions and interests would be developed, and who would be responsible for their compilation. Four categories of curriculum that roughly corresponded to four broad types of socio-economic circumstances were eventually adopted. The first was for schools in developed regions with advanced economic and educational conditions. The second was for schools within regions that were predominantly agricultural, and were generally considered to be areas with poor economic and educational conditions. The third was for schools in minority nationality regions, especially in west and southwest China. The fourth was for everything else and represented all the 'average level' schools in China. In 1990, the compilation of nine different sets of teaching materials based on these four categories was initiated by nine different publishers across China.

Shanghai had always been a pioneer in leading new initiatives and in adapting to new conditions, including in the field of education. When the SEC called for proposals, educational specialists in Shanghai responded with considerable enthusiasm. Educational authorities in Shanghai were thus granted the privilege and responsibility of developing a set of curriculum materials for schools in the coastal developed regions including Shanghai Municipality, and adjacent Jiangsu and Zhejiang Provinces. This article will examine the changes to the middle school geography curriculum in Shanghai with a view to understanding the underlying processes and other factors which determined the success or otherwise of such changes.

Did changes to the geography curriculum in Shanghai achieve the desired results? To answer this question this study will examine the new geography curriculum and supporting materials, assess the nature of teaching practice as it relates to the new curriculum, and explore the role of examinations in secondary school geography teaching. The new geography textbooks will be analysed to identify and characterise specific curricular changes. Data from a survey questionnaire are utilised to explore the point of view of teachers at the grass-roots level regarding the changes to the textbooks and the impact of these changes on teaching practice. Extensive observations of several geography classes were undertaken to obtain first hand information regarding teaching practice. Formal and informal interviews with a number of stakeholders, including teachers, parents, academics and other education specialists were also conducted. A number of city-wide geography graduation and university entrance examination papers, covering both the old and the new curriculum, were analysed to determine the impact of examinations on teaching practice. In relation to an analysis of the wider cultural politics of educational change, these findings were used to determine to what extent the new geography textbooks were consistent with the curriculum reform plan adopted for middle schools in Shanghai and what impact, if any, they had on teaching practice.

The following section focuses on the nature of curriculum development and implementation in Shanghai. A detailed case study of the processes of geography curriculum development is conducted to illustrate the nature of these changes in relation to the particular hierarchies and methods of educational reform in China. This is followed by an analysis of the new geography curriculum, including a detailed look at the new textbooks, which examines the key practical outputs of the curriculum development process in Shanghai. The processes of undertaking these changes in Shanghai are then compared to elements of conventional 'Western' concepts and models of curricular reform. This comparison serves to highlight how the wider institutionally embedded dimensions of educational reform in China have affected specific practical outcomes. The analysis of the new geography textbooks, in relation to the implementation and teaching of the new curriculum and a discussion of the impact of the examination system on teaching practice, point to the grass-roots impacts of changes to the geography curriculum in the context of educational reforms in Shanghai and across China. The article concludes with a discussion of the important implications of these findings in terms of both the theory and practice of educational change, and how these are informed by an understanding of the wider cultural politics of curricular reforms in China.

The processes of curriculum development in Shanghai

Initiating curricular reform

To underscore their determination to improve standards of education, in May 1985 the Chinese government issued the Decision of the Central Committee of the Communist Party of China on the Reform of the Educational Structure, hereafter referred to as the 'Decision'.[4] The guiding principle was that 'education must serve socialist construction while socialist construction must depend on education'.[5] One of the first responses to the Decision was the release of the Nine Year Compulsory Education Law in 1986. A nine year compulsory education system has gradually been introduced, region by region, since then throughout China. However, the existing curricular organisation of primary and secondary school education came to be viewed as contrary to the task of popularising and achieving widespread nine year compulsory education. The main problems were related to the content of the curriculum and teaching materials. Regardless of local socio-economic circumstances, and varying conditions in schools, the same curriculum and textbooks were being used throughout China. Due to the unified character of teaching materials, students in rural areas, especially in the poorer regions of China's interior, had greater difficulty with the standardised curriculum, while students in more developed urban and coastal areas often felt 'hungry' to learn more.[6] In 1986, the State Education

4. Central Committee of the Chinese Communist Party, *Decision of the Central Committee of the Communist Party of China on the Reform of the Educational Structure* (Beijing: Foreign Languages Press, 1985).

5. T. Wang, 'Wise policies for promoting education's contribution to economic and social development', in Central Institute of Educational Research, ed., *China Educational Sciences* (Beijing: Educational Sciences Publishers, 1986), p. 31.

6. M. J. You, 'Development and reform of China's school curriculum and teaching materials', in Curriculum Materials Research Centre of the State Education Commission, ed., *Curriculum Research* (Beijing: Educational Sciences Press, 1994), p. 7.

Commission responded by proposing sweeping changes to the existing curriculum and teaching materials for primary and secondary schools.

A National Supervisory Committee of Primary and Secondary School Teaching Materials attached to the SEC (hereafter referred to as the National Committee) was established in Beijing in 1986. The mandate of the National Committee was to initiate reforms of the existing curriculum and teaching materials used in primary and secondary schools across China. The plan was that by the end of the 1990s, the national standardised teaching materials would be replaced by the four categories of curriculum that roughly corresponded to the four broad types of socio-economic circumstances described earlier.[7]

The Shanghai Municipal Education Bureau was invited by the National Committee in 1988 to compile a set of independent teaching materials and course plans for schools in the more developed coastal regions. Later that same year the Shanghai government responded by establishing the Shanghai Primary and Secondary School Curriculum and Teaching Materials Reform Committee (hereafter, referred to as the Shanghai Committee) to oversee the changes. Under the Shanghai Committee, there were two sub-committees. One, called the Reform Office, was responsible for compiling a general system-wide curricular reform plan. The other, called the Supervisory Committee, was responsible for examining and approving all the new course plans, teaching materials, and other related changes. The ultimate purpose of the reform stated by the Shanghai Committee was to 'satisfy the needs of economic and social development'.[8] The next sections elaborate on the details of the way in which curricular reforms were organised and undertaken in Shanghai within the wider institutional frameworks.

Phase one: the plan for curricular reform in Shanghai

The reform process in Shanghai consisted of two major phases. The task set up by the Shanghai Committee in phase one was to produce a tentative plan for curriculum reform, which included changes to the General Teaching Outline (*Jiaoxue Dagang*) that specified the overall curriculum organisation and the timetable arrangement for various school subjects. The process of formulating the new plan in phase one was divided into three periods which are summarised below.

Period one: investigation and research (July–December 1988). The Reform Office, according to the terms of reference from the Shanghai Committee, organised and trained 30 specialists in five groups to conduct 'social investigations'. The groups were comprised of 'first rank teachers' (*yiji jiaoshi*), who had at least 20 years of teaching experience, 'high rank teachers' (*gaoji jiaoshi*), who had moderate teaching experience and who had also made special contributions in educational research in primary and secondary schools, university professors, and personnel from several educational publishers. Their task was to collect a range of opinions about the existing curriculum structure and teaching materials from various sectors including

7. *Ibid.*, p. 3.

8. S. H. Wang, 'Speech at the meeting to establish the Primary and Secondary School Teaching Materials Reform Committee', in Reform Office, ed., *Shanghai Primary and Secondary School Curriculum and Teaching Materials Reform* (Shanghai: Shanghai Education Press, 1990), p. 3.

from primary and secondary schools, technical schools, local education bureaux, universities, factories, companies, rural enterprises, research institutions and publishers.[9] The Reform Office also retained the Teaching Methodology Research Institute and the Comparative Education Research Institute, both at East China Normal University in Shanghai, to review materials regarding educational change in foreign systems and in China, and to study theories of curriculum development.

Period two: writing the plan (December 1988–April 1989). Each of the 30 members of the five social investigation groups under the Reform Office submitted a tentative plan which, following meetings and discussions within the groups, were utilised to compile five comprehensive proposals for curriculum reform in Shanghai. School principals, administrators, and other special rank teachers (*teji jiaoshi*) who had long teaching experience and who had published in the field of education, were invited to analyse and compare these five plans which were then further refined to form three alternative plans. Finally, school principals and specialists in education and psychology worked with selected members of the original social investigation groups to 'revise and merge' these three plans into one comprehensive plan for primary and secondary school curriculum change in Shanghai.

Period three: examination and approval (April–August 1989). The first draft of the reform plan was submitted to the Shanghai Supervisory Committee on 4 April 1989. After a few revisions, the final draft was completed on 16 August 1989 and was approved by the Shanghai Supervisory Committee. The Shanghai Supervisory Committee then sent the plan to the National Committee for final approval. Broad structural changes in the curriculum proposed in the Shanghai plan established the context for more specific processes of change in each of the subject areas which comprised the second major phase of reforms in Shanghai.

Phase two: preparing the teaching plans and teaching materials for the new geography curriculum

The second phase in the reform process was to determine the course plans and prepare the teaching materials for all subjects in the primary and secondary levels. This phase commenced after the Shanghai curriculum reform plan was approved in August 1989 and was divided into three periods. Period one of this phase (from August 1989 to August 1990) focused on preparation of the initial course plans and draft teaching materials. Editorial boards for each subject were established to produce course plans. After evaluation and approval from supervisory boards for each subject, the editorial boards began to work separately on the various aspects of the new textbooks and other teaching materials. These materials were to be completed and made ready for trial at the beginning of the 1990 school year. Period two (from September 1990 to August 1993) was for trials and revisions of the new teaching materials. Drafts of the teaching materials for each subject (mainly textbooks) were introduced experimentally at selected schools. Suggestions and other feedback regarding the new materials made their way back to the editorial boards who

9. Reform Office, 'Report of the investigations of the first phase of curriculum reforms', in Reform Office, ed., *Shanghai Primary and Secondary School Curriculum and Teaching Materials Reform.*

considered them and undertook revisions accordingly. The third period (from September 1993) marked the beginning of the introduction of the new course plans and teaching materials.

The reform teams for the primary and secondary school geography curriculum, including the supervisory and editorial boards, consisted of personnel from the Shanghai Teaching Resource Office, the Geography Sections of the Shanghai Education Bureau and the Xuhui District Education College (a district level branch of the Shanghai Education Bureau responsible for the local professional development of teachers). Those who were responsible for the actual writing work (the editorial board) were university professors, local educational administrators, and local publishing houses. The geography editorial board included several groups of people responsible for preparing different teaching materials, such as textbooks, teachers' reference books, maps, and students' exercise books. Two professors from the Teaching Methodology Research Institute of East China Normal University, along with one professional development specialist from the Xuhui District Education College and two others from the Shanghai Education Bureau, were responsible for compiling and editing all the geography textbooks for secondary schools in Shanghai. Some of the work for developing geography teaching materials, including textbooks and supplementary materials, such as maps, exercise books, and teachers' reference books, actually started as early as 1988, pre-dating the completion of the Shanghai curriculum reform plan. The materials developed and introduced during this interim period served as a bridge during the lengthy transition from the former to the new curriculum.

One of the first steps in the process of developing new course plans was to collect opinions about the existing syllabuses and teaching materials, and suggestions for the new course plans and materials from administrators, school teachers, students, and parents. The information, opinions, and suggestions were gathered through interviews, questionnaires, and symposia. All of these materials were discussed and analysed by the editorial board. Then the compilers worked out a new course plan for each grade. After several revisions, the course plans were submitted to the Shanghai Supervisory Committee. Following examination and approval, the editors of each subject began to write new teaching materials. Between 1991 and 1993 the new Grades 6, 7, and 8 geography textbooks were completed.

Xuhui, an urban district of Shanghai, was selected as the location for the experimentation and trials of the new geography course plans and sections of the new textbooks. Other districts throughout the city selected only one or two schools each to participate in the trials. There were a total of 22 schools throughout Shanghai selected to pilot the new materials. In all cases, Xuhui District was responsible for directing the trial work. Supervised by the Geography Section of the Xuhui Education College, some local teachers were organised into a study group. They were responsible for producing the teaching plans for each lesson based on the new curriculum, which would then be distributed to all the experimental schools in Shanghai. Some demonstrations for coping with the new course content were given by teachers in the study group through various model lessons. However, heads of the editorial board rarely participated in the study group's activities, although they were seen to observe a few of the model lessons. During the experimental period,

the compilers, based on suggestions from teachers and students, revised the textbooks accordingly.

Review of the process: some preliminary issues

Figure 1 illustrates the interrelationships among the major organisations and their basic tasks in the production of the Shanghai Curriculum Reform Plan and the

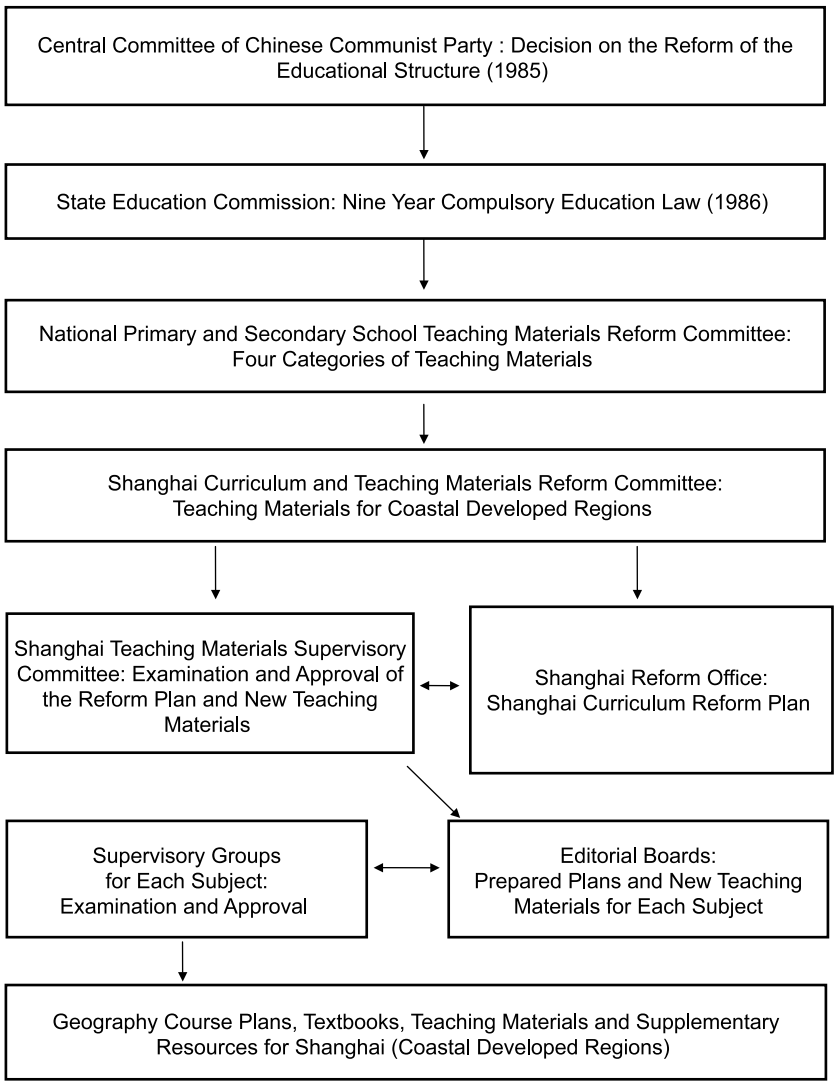

Figure 1. The Educational Reform Plan and development of the new geography curriculum in Shanghai.

development of the changes in the geography curriculum in Shanghai. There are several aspects to the structure of this framework of change which need to be highlighted. The first relates to the clearly hierarchical top-down structure of this framework. The plans for reforms and the development of the new geography curriculum, which were the end product of this process, were rigorously pursued under a rather formal set of imposed structures within the educational bureaucracy. Measured in these terms, many of the outcomes were highly successful. However, it is also clear that at least two other fundamental issues were not explicitly addressed. The first relates to the apparent lack of any meaningful system of evaluation at any of the stages or at any level of this process to determine whether or not the goals of the reform plan had been achieved. The second, and perhaps even more important point, is that nowhere in the process was there any evidence of a meaningful comprehensive plan for the actual 'grass-roots' implementation of the new curriculum. These oversights created many problems for the implementation of the new curriculum in general, and for teaching practice in particular. Indeed, from the point of view of geography teachers in Shanghai all this boiled down to having to cope with the imposition of a new curriculum embodied in the new textbooks.

The new Shanghai geography curriculum

Since the prescribed textbooks were essentially the only resource available to most teachers in China, analysis of their content and structure is critical to understanding the nature of the new curriculum and their influence on teaching practice. This section will examine the characteristics of the new geography curriculum and the way in which it was embodied in the new textbooks.

Structure and organisation of the new curriculum

According to the new Shanghai Curriculum Reform Plan, basic geographical knowledge was to be introduced in the General Knowledge course taught from Grades 1 to 5 and in the Social Sciences course taught from Grades 3 to 5. Geography, as a separate and required subject, was taught from Grades 6 to 8, and in Grade 11. The time allocated for geography in each grade was once a week in Grade 6, twice a week in Grade 8, and three times a week in Grade 11. Table 1 illustrates the distribution of geography courses and time periods between the former and the new geography curriculum in Shanghai. By removing geography from the Grade 10 curriculum and adding one more lesson a week in Grade 11, the total

Table 1. Distribution of geography lessons per week in secondary schools in Shanghai

	Junior				Senior		
Grade	6	7	8	9	10	11	12 (Elective)
Pre-reform	1	2	2	–	2	2	3
New plan	1	2	2	–	–	3	3

Source: From field notes.

number of required geography lessons that a student would take in secondary school was reduced by 8%. The sequencing of geography courses was also adjusted as illustrated in Table 2. In the new curriculum, World Geography was to be taught in Grade 6 with the Geography of China now moved to Grade 7. Environmental Geography, originally taught in Grade 10, was combined with Human Geography and taught in Grade 11. The Grade 12 elective geography course was a general review of all the geographical knowledge taught throughout junior and senior secondary school, including World Geography, Geography of China, Environmental Geography, and Human Geography. This course, taken primarily by those students who planned to write the university entrance examination in geography, has remained unchanged and will not be discussed in any further detail here.

Textbooks and the content of the new curriculum

Analysis of the new textbooks reveals several aspects of the changes to the geography curricula. Perhaps the most obvious of these evident in the new textbooks was that the amount of detailed information they contained had been substantially reduced. For instance, the sections discussing rain formation along frontal surfaces in the Physical Geography course was eliminated. In other sections, long introductions to the cities of Xian, Luoyang, and Kaifeng were completely removed in the new textbooks. Rather than introducing individual countries in a regular standardised format in terms of location, territory, population, landforms, climate, economy, and so on, the new texts for the World Geography course divided major countries into three groups. A different thematic emphasis was placed on each group of countries which, in practical terms, resulted in the exclusion of large amounts of detailed factual information about each and every country as was common in the old curriculum. Meanwhile, key general issues and concepts were discussed more thoroughly, though very much apolitically.

The section on the former Soviet Union in the new textbooks, for example, avoided any discussion about the collapse of Communism and simply introduced territories arising from changes in administrative boundaries. Topics like Taiwan and Tibet are treated in a matter of fact way based on official views. In general terms, however, content and organisational changes in the textbooks reflected a greater emphasis on comprehending topical and regional themes and broad geographical concepts rather than the previous focus on providing as much detail as possible. The content of the geography curriculum, in terms of the topics covered in the new textbooks, also incorporated numerous changes in the sequencing within and between the courses. Topics, such as Space and the Earth, Maps, and Weather and Climate that used to be

Table 2. Distribution of topics in secondary school geography in Shanghai

Grade	6	7	8	10	11
Pre-reform	Physical	China	World	Environment	Human
New plan	Physical	World	China	–	Environment and Human

Source: From field notes.

part of the Geography of China textbooks, were shifted to the Grade 6 Physical Geography course. It is at this level in particular that rather complicated themes and concepts were now presented in summary format without extensive reference to detailed examples and case studies.

Other changes in the new textbooks included an increase in the number and quality of illustrations. The new Physical Geography textbook, for example, included about 150 illustrations, such as photographs, maps, sectional drawings, sketches, statistical tables, and even satellite images—many of them in colour. The old texts on the other hand were printed in black and white, apart from the covers, and the few images therein largely consisted of poor quality sketches. Each of the new World Geography and Geography of China textbooks also had about 100 high quality illustrations. However, there were numerous inconsistencies and inaccuracies among the illustrations and corresponding text both in the new textbooks and the students' workbooks. 'Liu Pan Shui', for example, a source base for coal extraction in China, was mentioned in the second volume of the Geography of China textbook, but was not indicated on any of the corresponding maps. Some illustrations also lacked accurate information or proper explanations.[10] Teachers and students were often confused by these inconsistencies and were frequently unclear about how to interpret the information presented.

Unlike the old textbooks, questions and exercises only appeared at the beginning of each section in the new textbooks and did not cover any of the previously taught material. While some questions in the textbooks required some map reading, most tested students' prior knowledge of the topics at hand and were supposed to encourage open ended discussion as an introduction to the new topics to be presented in class. Other questions related to the kind of geographic matters that students might encounter on a daily basis as a way of increasing students' interest in the forthcoming topics to be covered in the class. For example, in Chapter 8 on mineral resources in the Geography of China text, there were three sections, including questions designed to arouse students' interest and to stimulate their motivation for learning. However, closer analysis of these and other similar questions revealed that they largely required the recall or simple utilisation of information presented in the texts. More creative exploration or inquiry using these or other data was neither required nor encouraged.

Significantly, changes to the textbooks did not include any sort of reference list or bibliography for further reading. This seems contrary to the apparent goal of motivating and encouraging students (and teachers) to pursue individual interests more deeply on particular topics. The textbooks provided very little direction to relevant further information or supporting resources. In addition, by reducing or eliminating some of the detailed content, the new textbooks often did not achieve the fundamental reform goal of reducing teaching and learning loads in practice. Many teachers felt that some of the material no longer found in the new texts was needed in order to teach certain topics well. For instance, in order to clearly understand the impact of monsoons on the climate of China, students needed to learn about the characteristics of monsoons and processes and mechanisms that caused the

10. S. T. Chu, *Brief Introduction to Geography Teaching Materials in Nine Year Compulsory Education in Developed Areas* (unpublished report of the Shanghai Geography Teaching Materials Committee, 1993), p. 59.

monsoons. However, much of the detail relating to these were not in the new texts, nor was there an alternative source for such information anywhere listed. Teachers felt the need to provide some practical examples, such as the distribution of annual precipitation in Beijing described above, even if it was not found in the textbooks. Thus, in practice, since much of the content of the former textbooks was no longer in the new books, many teachers simply continued to consult the old texts as a necessary resource. The detailed characteristics of the new textbooks was to play an important role in the implementation of the revised geography curriculum.

Implementation of the new geography curriculum

In the summer of 1994, specialists from the Geography Sections of all the district and county education colleges throughout Shanghai attended the first meeting to study the new course plans and textbooks. This was followed by several further meetings throughout the rest of the 1994 school year for educational specialists at the district level. The main purpose of the meetings was to discuss the specific changes in the geography curriculum, particularly with respect to the textbooks. The teachers involved in the trials in Xuhui District were called in to introduce their experiences in coping with the new textbooks. Some teaching demonstrations were also conducted, mainly focusing on the teaching plans and teaching methods for certain topics. During the new curriculum dissemination period, one person from the geography editorial board came only once to the Shanghai Education College to introduce the purpose of the curriculum reforms, and then only in a very general way.[11]

The dissemination of the new geography curriculum to teachers at the school-level started at the beginning of the 1994–1995 school year. Most teachers' initial contact with the new curriculum and related materials occurred during the regular meeting times scheduled for local geography teachers' professional development at the district education colleges held every other Thursday afternoon. Meanwhile, the Number 2 Middle School attached to East China Normal University and the Number 2 Chaoyang Middle School in Putuo District were selected to pilot the new geography curriculum in its entirety. There were only two teachers in these schools who experimented with the new geography textbooks—both at the junior secondary level. Both teachers were asked at the district education college meetings to introduce the methods they utilised for teaching certain topics to geography teachers from other schools in Putuo District. At these so-called 'collective preparation' (*jiti beike*) meetings, no supporting materials regarding the changes in the geography curriculum and teaching materials were distributed. Moreover, no one from the editorial board ever appeared at any of these collective preparation meetings. In addition to a verbal introduction, district educational specialists organised teachers to observe demonstration lessons by the trial teachers and others, to provide some examples of how to overcome difficulties regarding the presentation of certain content that emerged as problematic in teaching. The main task of the educational specialists in each of the district education colleges was to assist practising teachers to cope with

11. Interview notes.

new teaching materials. They acted as mediators between those designated by the Shanghai Education Bureau to develop the new curriculum and school teachers.

However, by the second term of the 1994–1995 school year, the time allocated for such preparation was utilised instead for the collective preparation for the city-wide geography graduation examinations and other activities, including a knowledge contest on environmental protection. Neither teachers nor the district educational specialists were too concerned about the needs associated with the effective implementation of the new textbooks. Ultimately, teachers were largely on their own, doing whatever they could in terms of how to utilise the new textbooks. They received little support from either their colleagues or district level educational specialists. Apparently, teachers were required to implement the new changes with little conceptual, psychological, or pedagogical preparation. Meanwhile, since certain materials, including some of the teachers' reference books, had not yet been completed, the new course plans and textbooks for senior secondary schools remained in the trial phase well into the 1995–1996 school year. The new textbooks and supporting materials were not fully introduced into all middle schools in Shanghai until the 2000–2001 academic year.

The individuals and their respective organisations involved in the process of implementing change in the geography curriculum in Shanghai can be classified into three broad categories. The first was a small number of people (fewer than 50) who actively supported the changes and were most directly involved with the development of the new curriculum. This group was comprised of those involved with the development of the reform plan and the new geography texts and supporting materials. The second category, including a few individuals from the first, consisted of those teachers, local administrators, and district and Shanghai level supervisory staff involved with the experimentation and trials of the newly developed teaching materials. Though this category was slightly larger than the first (perhaps 50 or 60), it was still a relatively small group. The largest category by far consisted of all the geography teachers (about 900 across Shanghai in 1995–1996), school level administrators and staff, district level geography specialists and others who, while not in any way directly involved with the development of the reform plan and the curricular changes that emerged from it, were required to implement the new geography curriculum. Clearly the response of this third category to the changes has had (and continues to have) the greatest impact on the outcome of curricular reforms. Generally speaking, however, most teachers remained deeply ambivalent to the changes.

Problems with the implementation of the new geography curriculum

Several reasons can be identified which explain why teachers had such an attitude. First, secondary school teachers in China were rarely asked to participate in the development of the curriculum and teaching materials. They were primarily viewed by the educational bureaucracy as new policy receivers as was reflected in the process of curriculum development in Shanghai. From the example of the teachers' study group in Xuhui District mentioned above, however, we know that this 'receiver role' was changing somewhat, if only to a very small degree. However, it is also clear that

most teachers participating in the experimental process were there only to provide representational consent for various proposals. Among the more experienced teachers, this feeling of being disconnected from the processes of change may have been a deliberate defence mechanism evoked in response to the often traumatic vacillations in educational policy and change prior to 1978.[12]

Another of the underlying problems relates to the remuneration levels of teachers. Despite the many successful aspects of economic reforms in China, teachers still received relatively low pay. Moreover, compared to their colleagues in similar fields, teachers have for many years been among the most poorly paid.[13] In Shanghai, the income of a secondary school teacher was comprised of two components. The first, from the Shanghai government, was established by rank. The second, which used to be treated as 'bonus pay' (*jiangjin*), but which comprised roughly half of a teacher's salary, was paid by the school. This amount varied and was calculated based on several factors including experience, subjects taught, teaching load, administrative duties, grade(s) taught, student achievement in exams, and so on. Thus, older department heads teaching a large number of senior level classes in the 'core' subjects with bright students received higher pay.

Under this scheme, geography teachers were at a particular disadvantage for several reasons. Geography was not considered a 'core' subject (even though it was compulsory up to Grade 11), there were fewer lesson periods, geography was taught primarily in the lower grades, and the structure of the system of exams was such that students were not compelled to excel in geography. As a result, the school-based component of geography teachers' pay was relatively lower than other teachers', even though they might have similar qualifications, experience, and abilities. This, in combination with the ease of transition to new opportunities outside teaching since the early 1990s, resulted in a large number of geography teachers 'jumping the trough' (*tiao chao*) out of the profession.

Many of those who remained, supplemented their income by agreeing to teach more lessons across several grades. A typical first rank geography teacher taught 15 geography lessons across three grades every week during the school year. In addition, teachers were often responsible for a morning reading class three times a week and for the programme of student self-study in their school five times a week during the lunch break. This latter period was utilised to help students resolve any questions relating to their geography courses. In addition, several hours of professional development (usually meeting at the district education college) were scheduled each week. On top of all this, teachers were also required to cope with the new changes to the geography curriculum. Teachers in China had to perform multiple roles: as subject specialist; as disciplinarian; and often undertaking non-teaching related administration. These multiple roles and difficult working conditions constrained the teachers in attempting to fulfil the intended aims of the new curriculum in Shanghai. While the rationale and objectives of change were perhaps sound, most teachers failed to see how the reforms would result in a change in their actual priorities and practice of teaching. Taken together, these issues begin to help us understand why so

12. Interview notes.

13. K. M. Cheng, 'Financing education in mainland China: what are the real problems?', in B. J. Lin and L. M. Fan, eds, *Education in Mainland China: Review and Evaluation* (Taipei: Institute of International Relations, 1990).

many teachers in Shanghai were at best ambivalent regarding the new geography curriculum and the supporting teaching materials.

Lack of adequate information and training programmes to prepare teachers for implementing curriculum changes also contributed to the difficulties with the reforms. In the mid-1980s, along with a ranking system, professional development programmes were established for practising teachers across all of China. The goals of the new training programmes were to offer some pedagogical background for teachers and training in teaching methodologies and educational psychology. Geography teachers could study geographical education and geography teaching methodologies through these programmes. While such upgrading programmes for certain ranks of teachers concluded in the late 1980s in Shanghai, some of the underlying characteristics of such programmes were still seen in the more recent professional development programmes at least until the 2000–2001 school year. There was, however, a heavy emphasis on theory rather than on practice. While complete with frequent references to 'teaching', there was actually very little or no practical assistance offered to help teachers cope with implementing the new geography curriculum embodied in the new textbooks.[14] As a result of removing much of the considerable detail from the new textbooks, teachers were required to search for supplementary teaching materials of their own to help explain certain geographical phenomena. Many teachers, however, were not adequately prepared for this work. They were used to 'teaching by the book' or following the teaching models of other teachers. In general, they did not have the skills necessary to do research beyond the prescribed textbooks, let alone create any supplementary teaching materials on their own. Thus, many teachers complained that the content of the new geography textbooks was only a 'skeleton' (*gujia*) with no 'meat' (*rou*).

Curriculum reform in Shanghai and conventional models of educational change

While curriculum workers in China recognise the need for change, there is no apparent meaningful conceptual base or framework for achieving the goals of such change. Although some efforts were made in the reforms to the geography curriculum in Shanghai to place change within a wider theoretical context, these were not strongly linked to the processes or practice of change evident in the conceptual frameworks adopted elsewhere. Moreover, such attempts were most often reduced to a cursory review of usually outdated non-Chinese concepts and a search for the subject matter content taught in foreign educational systems.

While conventional models of curriculum change tended to be teacher oriented,[15] in China such change was very clearly 'top-down' in terms of organisation and administration (see Figure 1). Curriculum committees consisted mainly of a number of university professors and some educational administrators. Few practising school teachers were involved in the determination and organisation of change. Any participation that did exist was usually very limited. Moreover, while some teachers were asked to investigate the use of some new curriculum materials, they were not at

14. Interview notes.
15. R. C. Doll, *Curriculum Improvement: Decision Making and Process* (Newton: Allyn and Bacon, 1986).

all involved with the actual preparation of course texts and supporting resources. Conventional theories of educational change highlight the importance and central role of teachers in the process and practice of curriculum implementation.[16] In contrast, the teacher's role was not as seriously considered in China. This was in part linked to the general lack of directly relevant high quality professional development and training for practising teachers. In addition, there was really no incentive for teachers to participate in any meaningful way. This outcome was a by-product of the structure of the curriculum development process wherein teachers were viewed simply as curriculum receivers. The developed curriculum was simply down loaded onto teachers with only minimal consideration of their role in the process of change.

Understanding the need for curricular change among all the key educational stakeholders is one of the preconditions for effectively implementing such change.[17] The purpose of change in China was most often captured in slogans and policy pronouncements. The stated purpose of curriculum change in Shanghai was to 'increase the quality of students, develop the personality of individuals, reduce the onerous study load, and improve the quality of learning'.[18] While such slogans were perhaps laudable, most teachers failed to perceive the practical relevance of such statements. As a result, teachers could not see how this would result in a change in their priorities and practice of teaching. Publicly, teachers were obliged to mouth the rhetoric of change, but in private they complained 'don't give me change, give me a map [and other materials] to teach'.[19]

Models of curricular change are also generally concerned with the attitude and mind-set of participants, especially of teachers.[20] Implementing change in this context was an open process. It allowed for a range of inputs, often seeking consensus and collaboration. However, implementing curriculum change was a much less open process in China. Since change was largely determined from above, the structure and organisation of change did not readily facilitate constructive debate and the accommodation of alternative viewpoints. Curriculum workers 'must' achieve consensus and 'unified agreement' to implement change in China. Individual or alternative perspectives contrary to the so-called 'collective view' were merely sidelined to achieve unanimity.[21]

Curricular elements, such as tempo, timing, teaching activities, adaptation, and adoption, by their very nature, cannot be predetermined in the process of educational change.[22] Tempo and timing, in China, were not even perceived in the same way. The timetable of changes to the geography curriculum in Shanghai was largely predetermined and offered little room for flexibility. Linked to the fact that teachers were not intimately involved with the process of change, there seemed to be little in

16. C. Marsh and P. Morris, *Curriculum Development in East Asia* (London: Falmer Press, 1991).
17. Doll, *Curriculum Improvement*; M. K. Fullan, *The New Meaning of Educational Change* (New York: Teachers College Press, 1991).
18. Chu, *Brief Introduction to Geography Teaching Materials*, p. 3.
19. Interview notes.
20. A. Hargreaves, 'Cultures of teaching', in S. J. Ball and I. F. Goodson, eds, *Teachers' Lives and Careers* (New York: Routledge, 1985); D. W. Johnson and R. T. Johnson, *Learning Together and Alone* (USA: Allyn and Bacon, 1994).
21. Interview notes.
22. T. Becher and S. Maclure, *The Politics of Curriculum Change* (London: Hutchinson, 1978); Doll, *Curriculum Improvement.*

the way of determining the activities and alternatives regarding the adaptation and adoption of change. Moreover, curricular development in China was primarily content based. The processes and practices of implementing curriculum change focused almost exclusively upon course content which, in the Chinese context, was virtually synonymous with the prescribed textbooks.

This comparison suggests that the conventional wisdom of established (largely Western) theories which conceptualise and model the processes and practice of curricular change do not seem to adequately accommodate key features of the reforms observed in China. Thus, in order to understand and explain the situation of Chinese teaching practice, the nature of curriculum development needs to be more carefully considered in relation to other components of educational change. As with school systems elsewhere, curriculum, textbooks, and teaching practice in China are interrelated. The unique characteristics of curriculum development and implementation in Shanghai have set a foundation for further exploration of these interrelationships. The next sections will review some of the key findings from an analysis of the links between the curriculum, the new textbooks, various examinations and teaching practice in geography classes in Shanghai. Taken together this analysis will highlight the interplay between the details of curricular reform and the wider circumstances of educational change in Shanghai.

The new geography curriculum in Shanghai

Textbooks in China were seen by most teachers as the sole reference for curricular content. Teachers relied heavily upon the texts for their teaching. Extensive observations and discussions with geography teachers over the period of the introduction of the new textbooks also confirmed that many persisted with the traditional teaching methods of memorisation and rote learning.[23] The highly structured content-oriented nature of the geography curriculum incorporated and disseminated through the prescribed textbooks, despite the recent changes, largely precluded any opportunity or need for alternative methods of teaching. Moreover, the textbooks were frequently the only teaching resource to which teachers had ready access. Despite the widespread distribution of the new textbooks by 2000, many teachers also continued to utilise the older texts as reference sources. Despite the goals of the new curriculum, a textbook-based teacher-centred approach was still widely used in secondary school geography classes in Shanghai.

In China, development and implementation of the geography curriculum, geography teaching practice and student evaluation existed as three largely separate components of a disarticulated educational system. The university professors, educational bureaucrats and administrators who led the development of the new geography curriculum had very little direct contact with schools and practising teachers. While the people who wrote the examinations were also largely from the universities, they did not collaborate or consult in any organised or structured way with those who developed the new curriculum. Meanwhile, teachers, who played a

23. A. M. Marton, 'Geographical education and curricular reform in China', paper presented at the *Annual Meeting of the Association of American Geographers* (New Orleans, 5–8 March 2003).

negligible role in the development of either the new curriculum or the various examinations, were essentially left on their own to cope with these things as best they could. It is neither surprising nor unexpected, under such circumstances, to find that classroom practice in Chinese middle school geography lessons is teacher-centred, focusing on the need for students to achieve high marks on the examinations largely through lecturing and rote learning.

It seems that Chinese circumstances and practice did not readily coincide with the standard accepted conceptualisations of geographical education. While stated objectives of the geography curriculum might be seen to correspond to some of these broader somewhat idealised concepts of geography teaching, the actual situation observed in Shanghai secondary schools clearly challenged these ideals. The new geography curriculum and the role of the new textbooks in geographical teaching have also been influenced by the nature of the examination system.

Examinations and the teaching of geography

A complete understanding of the nature of curriculum reform in secondary school geography and the impact of the new textbooks on teaching in Shanghai, cannot be achieved without an appreciation of the role of the examination system. Examinations still play a selecting role in the Chinese school system. The results of various examinations determined a student's future academic life. In addition, examinations were still the main method used for evaluating students' achievement, teachers' effectiveness, and the success of schools in China. The basic goal for most students and their teachers was to study and teach solely for achieving the highest possible marks on examinations. The examination system has become a key factor in determining the content and methodology of geographical teaching in Shanghai.

Research undertaken during the implementation of the new curriculum illustrates how the new graduation and university entrance examinations influenced the nature of teaching, both in terms of content and methodologies.[24] Regional geographical topics testing the recall of general knowledge were heavily emphasised in the examinations. It is noteworthy that the examinations based on the new curriculum tested even more detail and an even wider array of content than the examinations based on the old curriculum. The relative weighting of exam questions also indicated that broader geographic themes and comprehension-related questions were emphasised less than the testing of detailed knowledge. Indeed, examinations tended to emphasise low-level cognitive skills with a large number of questions requiring merely the recall of knowledge.[25] As a result, teachers and students were naturally much more likely to focus on rote learning and memorisation to achieve greater success in these examinations. Taken together, analysis of the content and cognitive levels of these examinations strongly suggests that they contradicted and probably even counteracted the stated goals of reforms to the geography curriculum in Shanghai.

24. *Ibid.*
25. *Ibid.*

However, since no one could afford to ignore the pressures of the examination system, it was not surprising that the traditional methods of lecturing and rote learning remained dominant in geography teaching practice, even though other methods have been demonstrated to be more efficient and effective in improving students' cognitive level of thinking and interest in the discipline. The dominant impact of these examinations on teaching practice has been so profound that teachers and other school workers in Shanghai have found it very difficult to implement the new geography curriculum effectively. Changes to the existing examination system have been debated for some decades in the Chinese educational realm. If significant changes to the examinations were indeed undertaken, they would need to be sensitive to all the practical complexities of Chinese schooling in such a way as to have a positive influence on teaching practice and the quality of student learning.

Conclusion

While specific changes to the geography curriculum in Shanghai were vigorously and by certain measures successfully pursued, the way in which such changes were developed and implemented essentially undermined the intended goals of curricular reform. Although the geography curriculum was revised, as reflected in the new teaching materials and especially the new textbooks, what was going on behind the classroom door remained fundamentally unchanged. Various forms of memorisation and rote learning were still the dominant teaching methodologies in geography classes in Shanghai. Modern educational reforms in China apparently encountered both the disjunction between the official aims of schooling and the actual processes and mechanisms which sought to develop and implement such aims, and an embedded traditional and largely unchallenged pedagogical and examination orthodoxy in Chinese classrooms. This echoes historical patterns where such orthodoxy was perceived as '... a solid wall that teachers and students dared not surmount ...', impairing creativity and the ability to transcend established norms.[26]

Then, as it remains now, this latter observation was also clearly linked to the nature of the examination system. Analysis of the examinations themselves has revealed at least two key findings. First, the examinations largely focused on testing a wide array of regional geographic knowledge, and on testing a very narrow range of thematic understandings and geographic skills which might be considered more intellectually demanding. Even the most recent post-reform examinations focused on detailed content, contrary to the stated goals of the new geography curriculum. Second, not unlike the character of the examinations which preceded the most recent curriculum changes,[27] to a very high degree the newest examinations also emphasised low level cognitive skills with a disproportionately large number of questions requiring merely the recall of knowledge. Moreover, findings from the classroom observations and interviews with teachers revealed that geography teaching methodologies predominantly treated students as passive receptors of knowledge with most

26. Z. Yuan, 'The status of Confucianism in modern Chinese education, 1901–49: a curricular study', in G. Peterson, R. Hayhoe and Y. L. Lu, eds, *Education, Culture, Identity in Twentieth-century China* (Ann Arbor: University of Michigan Press, 2001), p. 213.

27. Marton, 'Geographical education and curricular reform in China'.

classroom activities focused on lower levels of thinking. Such teaching methodologies were entirely consistent with the nature of the city-wide graduation examinations in geography administered in Shanghai. Taken together, these findings confirm that the examinations remained as perhaps the most significant influence on curricular content and teaching practice in the Shanghai geography classroom.

Implications

In view of the continuing educational reforms in China, the influence of the examinations, including the university entrance and graduation examinations, must not be overlooked. Results of this research indicate that in addition to the provision of new textbooks and other teaching materials, the professional development of teachers, instructional reforms, and revision to the examinations are necessary for them to remain compatible with the goals of the new geography curriculum. In fact, without a wholesale transformation of the examination system there will be little incentive for teachers to implement the new curriculum or to change their teaching methods.

Recent statements from the education authorities in Shanghai have once again reiterated expectations that local schools will be expected to '... provide a holistic approach to student development', including changes to the management of the curriculum to allow school level autonomy to design and innovate with 6–7% of curricular content.[28] This objective will become another meaningless slogan if the structure and emphasis of the graduation and university entrance examinations are not fundamentally reformed. There is a popular saying among secondary school geography teachers in Shanghai: 'Those who edit school textbooks do not teach, and those who design the university entrance and graduation examinations are not the textbook editors'.[29] While such a state of affairs was probably not intentional, the practical results were a conflict between the goals of the new geography curriculum, as embodied in the new textbooks, and the content and cognitive priorities apparent in the examinations, with inadequately prepared and largely unmotivated teachers (and students) caught in the middle. Therefore, it is important that the content and structure of the geography examinations be coordinated along with changes to the curriculum. Since examinations will likely continue to be the primary means for selecting students and evaluating the effectiveness of schools and teachers, they will remain as the single most important influence on teaching methodologies. Reforming the content, format, and cognitive level of examination questions would seem to be an essential component of curricular reform. Specifically, the examinations should respond to and reflect the required cognitive levels and skills which more closely correspond to the goals of the new geography curriculum.

The provision of resources and meaningful in-service professional development for teachers in Shanghai should be incorporated into the process of curriculum development. The central pursuit of worthwhile goals has resulted in a concentration

28. Wah Ching Centre of Research on Education in China, 'Second phase of curriculum reform began in Shanghai', *China Education News* 4(19), (2002). Archived online at: http://www.hku.hk/chinaed/chinaed_news/chinaednews_no19_2002.html, p. 2.

29. Interview notes.

on the initial phase of curriculum development and a relative neglect of those activities designed to support subsequent implementation. This scenario will sound familiar to those who study elements of the reform process in other sectors in China. Although there was some in-service professional development, it did not adequately provide the means to assist teachers in implementing the new curriculum. Teachers were provided with only a very limited range of support activities such as basic information on the new curriculum, some very elementary teacher training and practical classroom resources. The 900 or so geography teachers in Shanghai were placed in a position where they were expected to implement a new curriculum with extremely limited involvement in its creation, little appreciation of the rationale, details and wider context it embodied, and minimal or no support in terms of resources and training. An appropriate teacher training programme is an important aspect in the success or failure of any new curriculum and should have been a major concern for the educational authorities in Shanghai. The fact that the new geography textbooks in Shanghai took more than ten years to develop and implement perhaps indicates that more attention should have been given to teacher involvement and training rather than as a hastily considered after-thought to the development of the new curriculum.

Conventional theories and experience of curriculum development in English speaking school systems, strongly suggests that teachers' understanding and participation in curriculum change are the basis for its successful implementation. Such participation is generally accepted as a critical factor in ensuring the success of curricular change. Yet, teachers in China were not meaningfully involved in the curriculum development process. This in and of itself is not particularly problematic. It was perhaps unrealistic to expect teachers in China to be as involved in the curriculum development process as they might have been elsewhere due to the centralised system of policy making and their generally lower-level of professional development. However, teachers and other practitioners were neither adequately accommodated nor properly considered anywhere in the processes of curricular reform investigated in Shanghai. The practical problems and grass-roots realities confronting teachers in China need to be more seriously taken into account in the process of curriculum development.

Curriculum reform, like economic reforms in China, has not emerged from a single comprehensive paradigm. The pragmatism implied in such an approach is sometimes associated with the lack of a sound theoretical basis and conceptual framework for change. This is also consistent with the rapid development of the economy and the sometimes traumatic political and social realities of such transformation. In order to meet the needs of economic development, educational policies have also been frequently adjusted. As a result, the school curriculum in China will likely undergo still further revision over the coming years. Indeed, the reality of such rapid transformation in China also provides a unique opportunity to undertake further curriculum changes—perhaps another chance to incorporate some of the elements suggested here for deeper and more meaningful educational reforms. As China's then Minister of Education, Vice Premier Li Lanqing, remarked in 1997, 'Chinese schools should seek to produce well-rounded students

of high quality, rather than those who are only good at reproducing the textbook under exam conditions'.[30]

This statement at once betrays the fundamental problem inherent in the Chinese educational system, and only vaguely hints at the potential solution. The onus is placed upon schools (and teachers) to produce the 'well rounded' students, while the examinations, which remain largely beyond their control or influence, clearly do not converge with this objective. These circumstances in China also suggest that more intervention from the top may be required to bring about change at the grass-roots. However, it is also very clear that resolving the key issues which have emerged from this study will also require the more careful coordination of educational elites and curriculum developers, school-level officials and classroom teachers in China.

30. 'Chinese Vice Premier Li Lanqing urges shift from exam-based education', *China News Digest*, (11 April 1997), available online at: http://www.cnd.org.